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v. 63  
#4

PHYTOLOGIA

An international journal to expedite botanical and phytoecological publication

Vol. 63

August 1987

No. 4

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AUG 31 1987

Published by Harold N. Moldenke and Alma L. Moldenke

590 Hemlock Avenue NW  
Corvallis, Oregon 97330-3818  
U.S.A.

NEW YORK  
BOTANICAL GARDEN

Price of this number \$3.00; for this volume \$16.00 in advance or \$17.00 after close of the volume; \$5.00 extra to all foreign addresses and domestic dealers; 512 pages constitute a complete volume; claims for numbers lost in the mail must be made immediately after receipt of the next following number for free replacement; back volume prices apply if payment is received after a volume is closed.



NOTEWORTHY GRASSES FROM MEXICO XIII

Alan A. Beetle, Range Management Section, University of Wyoming, University Station, P. O. Box 3354, Laramie, Wyoming, 82071.

In 1977 (cf Phytologia 37: 317-407) an annotated list of the grasses reported for Mexico was published. Since that time there has been a concerted effort by the Mexican Comisión Técnico Consultiva de Coeficientes de Agostadero of the Dirección General de Normatividad Pecuaria, Secretaría de Agricultura y Recursos Hidráulicos, to gather information on the taxonomy, distribution and forage value of the grasses of Mexico.

Personnel associated with this work have included:

Ing. Víctor Jaramillo V.  
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Ing. Rafael Guzmán M.  
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The list presented here is considerably more accurate than the first but much remains to be done.

For previous papers see Phytologia 27:1974, 28:1974; 30:1975; 35:1977, 38:1978, 47:1981, 49:33-34; 52:11 - 17. 1981; 54:1983,

## ACROCERAS Stapf

## Paniceae

- 5 - 6 species, both hemispheres, subtropical.
1. A. zizanioides (HBK) Dandy  
Pantropical, probably native.  
Southern México: Veracruz, Oaxaca, Chiapas, Tabasco, Campeche.

## AEGILOPS L.

## Hordeae

- 20 - 30 species, circum-Mediterranean.
2. A. cylindrica Host.  
Introduced.  
Northern México: Reported only for Chihuahua where cultivated.

## AEGOPOGON Humb. &amp; Bonpl.

## Chlorideae

- 3 species, New World.
3. A. cenchroides Humb. & Bonpl. var. cenchröides  
México to Colombia and Venezuela, native.  
Common from Chihuahua to Chiapas.
  - 3a. A. cenchroides var. breviglumis (Scribn.) Beetle  
Same distribution as the species but less common, native.
  4. A. tenellus (DC) Trin. var. tenellus.  
Arizona to Guatemala, native.  
Common from Baja Norte and Chihuahua south to Chiapas.
  - 4a. A. tenellus var. abortivus (Fourn.) Beetle.  
Northern range of the species but less common, native.  
Sonora south to México, Tlaxcala and Veracruz.

## AGROPYRON Gaertn.

## Hordeae

- 50 - 60 species, both hemispheres, temperate,
5. A. arizonicum Scribn. & Smith  
Northern México and adjacent United States, native.  
Mountains: Sonora, Chihuahua, Coahuila, Nuevo León, Zacatecas, San Luis Potosí, México and Morelos.
  6. Agropyron parishii Scribn. & Smith var. laeve Scribn. & Smith  
Southern California and adjacent México, native.  
Rare, northern Baja California Norte.
  7. A. trachycaulum (Link) Malte  
Boreal North America south in the mountains to México, native.  
Mountains: Baja Norte, Chihuahua, Coahuila, Nuevo León, Tamaulipas.
  8. Agropyron vaillantianum (Wulf. & Schreb.) Trautv.  
Europe, North America and South America, native.  
Northern México and the central highlands.

## AGROSTIS L.

## Agrostideae

- 150 species, New World and Old World, both hemispheres, temperate.
9. A. alba L.  
Introduced.  
Mesic sites: Chihuahua, Coahuila & Nuevo León south to Oaxaca.
  10. A. borealis Hartm.  
Circumboreal, south in the mountains to México, native.  
Mountains: Puebla (near Mirador Restaurant).

11. A. bourgaei Fourn.  
Either an introduced variation of A. alba or an endemic.  
Mountains: Hidalgo, México, and Tlaxcala and Guanajuato.
12. A. diegoensis Vasey  
Western United States south to Baja Norte, México  
Coast range: Baja Norte.
13. A. elliottiana Schultes  
Maryland to Illinois south to Georgia and Texas; México, native.  
Waste Places: reported only for Yucatán. (Where introduced)
14. A. exarata Trin.  
Alaska and western North America south to México.  
Moist places: Baja California; Chihuahua, Coahuila south to México.
15. A. ghiesbreghtii Fourn.  
México, endemic.  
Central Mountains: Hidalgo, México, Morelos, Guerrero, Oaxaca and Pico de Orizaba.
16. A. hiemalis (Walt.) B.S.P. var. laxiflora (Gray) Beetle  
Newfoundland to Alaska and south in the mountains to central México.  
Mountains : Baja California, Chihuahua, Coahuila, south to Chiapas.
17. A. liebmännii (Fourn.) Hitchc.  
México, endemic.  
Type loc: Chimantla, Veracruz; also Durango (type loc. for A. durangensis Mez); Queretaro, México y Oaxaca.
18. A. microphylla Steud.  
California and México, native.
19. A. palustris Huds.  
Introduced.  
Marshes: Baja Norte and Chihuahua, Coahuila.
20. A. perennans (Walt.) Tuckerman  
Quebec to Minesota, and south to Florida and Guatemala.  
Mountains: Durango, San Luis Potosí, Jalisco, Hidalgo, México, south to Chiapas.
21. A. rosei Scribn. & Merr.  
México, endemic.  
Mountains: Durango, Zacatecas, and México.
22. A. schaffneri Fourn.  
México, endemic.  
Mountains: Queretaro, Michoacán, México, Tlaxcala, Puebla, Oaxaca & Chiapas.
23. A. semiverticillata (Forsk.) Christ.  
Introduced.  
Wet places, common throughout México except only the Yucatán Peninsula.
24. A. subrepens (Hitchc.) Hitchc.  
México and Venezuela, native.  
Wet places: Chihuahua.
25. A. tacubayensis Fourn.  
México, endemic.  
Mountains: Michoacán, State of México and Oaxaca.
26. Agrostis tandilensis (Kunth) Parodi  
Southern California and adjacent México, native.  
Rare in northern Baja California Norte.

27. A. thyrsigera Mez  
México, endemic.  
Central Montains:
28. A. toluensis HBK  
México: south to Chile.  
Central Montains:
29. A. vinosa Swallen  
México and Guatemala, native.  
Central Montains.
30. A. virescens HBK  
México, endemic.  
Central Montains.

## AIRA L.

## Aveneae

About 10 species 9 Old World annuals

31. Aira caryophyllea L.  
Introduced.  
Reported from Oaxaca and Baja California Norte.

## ALLOLEPIS Soderstrom and Decker

## Eragrosteae

One species, North America.

32. A. texana (Vasey) Soderstrom and Decker  
Texas and México, native.  
Salt flats: Chihuahua, Coahuila, Tamaulipas and Durango.

## ALOPECURUS L.

## Agrostideae

20 - 30 species, Temperate regions.

33. A. geniculatus L.  
Northern hemisphere, temperate, native.  
Wet places: at its southern extreme reported from Chihuahua.
34. Alopecurus howellii Vasey  
From Oregon to the northwest corner of México, native.  
Rare in Baja California Norte.
35. Alopecurus saccatus Vasey  
Western Canada south to northern México, native.  
Rare in Baja California Norte.

## ANDROPOGON L.

## Andropogoneae

About 100 species, temperate to subtropical, worldwide.

36. A. (Anatherum) bicornis L.  
México to Argentina, native.  
Pine savanna or brush: Nayarit, Jalisco, Tamaulipas, Hidalgo, Puebla, Oaxaca, Veracruz, Chiapas, Tabasco, Campeche and Yucatán.
37. A. (Anatherum) bourgaei Hack.  
México, endemic.  
Stream draws; Veracruz (Type loc. Rio Blanco), Oaxaca, and Chiapas.
38. A. (Schizachyrium) brevifolius (Sw.) Nees.  
Tropical and subtropical regions of world, described from "Jamaica", native.  
Pine savanna: Sonora south to Chiapas.
39. A. (Schizachyrium) cirratus Hack.  
México and adjacent United States, native.  
Pine savannas: northern border states south to Chiapas.

40. A. (Schizachyrium) condensatus HBK  
As var. elongatum Roberty: México to Paraguay.  
As subsp. elongatus subvar. exserens Hack. in Mart. Fl. Bras.  
2:297. 1883: Brazil and México.  
Note: by some authors combined with A. microstachyus Desv.
41. A. (Anatherum) elliottii Chapm.  
Eastern United States, Cuba, southern México to British Honduras, native.  
Pine savannas: Chiapas; San Luis Potosí & Veracruz.
42. A. (Schizachyrium) gaumeri (Nash) Hitchc.  
México, endemic.  
Brush: Chiapas, Campeche, Yucatán.
43. A. gerardi Vitman  
United States to Honduras, native.  
Pine forests: Coahuila, Durango, Sinaloa south to Chiapas.
44. A. (Anatherum) glomeratus (Walt.) B.S.P.  
Southeastern United States, México, and the West Indies to Panama, native.  
Common in open areas throughout México.
45. A. hallii Hack.  
North Dakota and Montana south to northern México, native.  
Sandy soils: Chihuahua.
46. A. (Schizachyrium) hirtiflorus (Nees) Kunth var. hirtifloru  
Southern United States and West Indies to Bolivia and Uruguay, native.  
Pine forests and brush: common throughout México.
- 46a. A. (Schizachyrium) hirtiflorus var. feensis (Fourn.) Hack.  
Same distribution as the species.
47. Andropogon hirtifolius Presl  
native, endemic.  
Common in Central México, Jalisco and Guanajuato to Chiapas
48. A. leucostachyus HBK  
Southern México and the West Indies to Argentina, native.  
Pine forests: Guerrero, Veracruz, Chiapas, Tabasco, Oaxaca, and Campeche.
49. A. (Anatherum) liebmannii Hack.  
México, endemic.  
Pine forests: Nayarit, Jalisco, Michoacán, Hidalgo, Puebla, México, Veracruz and Oaxaca.
50. A. maderensis Swallen  
México, endemic.  
Canyons: Coahuila.
51. A. (Schizachyrium) malacostachyus Presl  
México to Costa Rica, native.  
Rocky hills: Jalisco, Guerrero, Puebla, Oaxaca, Chiapas & Yucatán.
52. A. mexicanus Hitchc.  
México, endemic.  
Open woods: Nayarit, Jalisco (Tipe Loc.) and Hidalgo south to Chiapas.
53. A. (Schizachyrium) microstachyus Desv.  
México and west Indies to Argentina, native.  
Pine forests or brush: Sonora, Sinaloa, Jalisco, Tamaulipas San Luis Potosí, Hidalgo, Morelos, Guerrero, Puebla, Veracruz Oaxaca, Tabasco and Chiaoas.

54. A. (Schizachyrium) muelleri (Nash) Hitchc.  
(a tetraploid variation of A. scoparius)  
México, endemic.  
Coastal: Veracruz.
55. A. (Schizachyrium) myosurus Presl  
México, endemic.  
Pine woods: Chihuahua, Durango, Sinaloa, Jalisco, Michoacán, Guerrero, México, and Oaxaca.
56. A. (Anatherum) pringlei Scribn. & Merr.  
México, endemic.  
Central mountains: Michoacán, México, Puebla, Veracruz, Oaxaca.
57. A. salzmanni (Trin.) Nash  
México to Paraguay (Type from Brazil) native.  
Brush: Tamaulipas, Veracruz, Oaxaca.
58. Andropogon sanguineus (Retz.) Merr.  
Florida, México, West Indies to Argentina, native.  
Brush, worldwide in the subtropics.
59. Andropogon schlumbergeri Fourn.  
Native, endemic, Durango & San Luis Potosí south to Oaxaca.
60. Andropogon scoparius Michx. var. frequens Hubb.  
Eastern U.S.A., common Texas, rare in México.
- 60a. A. scoparius var. littoralis (Nash) Hitchc.  
Northeastern coast of E.U.A., Great Lakes area and Texas, eastern coastal México, native.
- 60b. A. scoparius var. neomexicanus (Nash) Hitchc.  
Native, western Texas to Arizona and northern México.
61. A. selloanus (Hack.) Hack.  
México and West Indies to Argentina, native.  
Pine woods: Oaxaca, Veracruz, Campeche and Chiapas.
62. A. (Schizachyrium) semiglabus (Nash) Beetle  
México, endemic.  
Chihuahua (Type Loc.) "near Colonia García", Nuevo León, Jalisco, México and Chiapas.
63. A. semitectus Swallen  
México and Guatemala, native.  
Brush: Baja California Sur & Sonora south to Guerrero.
64. A. spadiceus Swallen  
México  
Coahuila (Type Loc.)
65. A. (Schizachyrium) tener (Nees) Kunth  
Southern United States and West Indies south to Argentina, native.  
Brush: Sonora and Tamaulipas south to Chiapas.
66. A. tenarius Michx.  
Delaware to Kentucky and Kansas, south to Florida and México, native.  
Sandy soil: Coahuila.
67. A. virginicus L.  
Southern United States and West Indies south to Panama, native.  
Pine woods: Coahuila, Nuevo León, Puebla, Veracruz, Oaxaca and Chiapas.



68. Andropogon wrightii Hack.

Native, rocky hills and mesas, southern New México and northern Mexico south to southern Veracruz.

69. A. yucatanus Swallen.

Brush: Yucatan and Campeche.

## ANTHEPHORA Schreb

Chlorideae

4 - 5 species in Africa, one in tropical America.

70. A. hermaphrodita (L.) Kuntze

Florida (where introduced), West Indies and Mexico south to Peru and Brazil, native.

Brush: Baja California Norte, south to the Yucatán Peninsula.

## ANTHOXANTHUM L.

Aveneae

3 - 4 species, European.

71. A. odoratum L.

Introduced.

Occasional in cultivated areas: Hidalgo and Mexico.

## ARISTIDA L.

Aristideae

200 species throughout the subtropics of the world.

72. A. adscensionis L. var. adscensionis

Widespread in subtropics of both New and old World, native?

Brush: common throughout northern Mexico.

72a. A. adscensionis var. abortiva Beetle

California and northern Mexico. native.

Dry washes: Baja Sur, Coahuila, Chihuahua and Durango

72b. A. adscensionis var. coarctata (HBK) Kuntze

West Indies and Mexico south to Venezuela, native.

Brush: Jalisco, Tamaulipas, Campeche, Yucatán

72c. A. adscensionis var. decolorata (Fourn.) Beetle

Mexico, endemic.

Brush: Baja Sur, Sonora, Guerrero, Oaxaca, Chiapas and Yucatán.

72d. A. adscensionis var. interrupta (Cav.) Beetle

Mexico, endemic.

Brush: Coahuila, Nuevo León, Tamaulipas, San Luis Potosí, Veracruz and Oaxaca.

72e. A. adscensionis var. modesta Hack.

California and Arizona south to Argentina, native.

Dry washes: northern border states south to Mexico.

72f. A. adscensionis var. nigrescens (Presl) Beetle

Mexico, endemic.

Dry washes: Baja Sur and Sonora south to Chiapas.

73. A. arizonica Vasey

Colorado and Texas south to Central Mexico (acc. Henrard), native.

Dry banks: northern border states (except Tamaulipas) south to the central highlands, and Oaxaca.

74. A. barbata Fourn.

Texas to Arizona and central Mexico, native.

Dry banks: northern border states south to Distrito Federal.

75. A. californica Thurb.  
Southern California and southwestern Arizona to  
Northwestern  
Mexico, native.  
Dry washes: Baja Norte, Baja Sur and Sonora.
76. A. capillacea Lam.  
Mexico to Bolivia and Brazil, native.  
Pine forests: Sinaloa, Nayarit and Mexico.
77. A. curvifolia Fourn.  
Mexico, endemic.  
Pine savanna: Coahuila, Nuevo León, Durango, Zacatecas,  
San Luis Potosí and Oaxaca.
78. A. divaricata H. & B.  
(including A. palmeri Vasey)  
Kansas to southern California south to Mexico.  
Dry banks: northern border states south to Oaxaca.
79. A. fendleriana Steud.  
North Dakota and Montana, south to Nevada, southern  
California and Mexico, native.  
Dry banks: Coahuila, Nuevo León and San Luis Potosí.
80. A. floridana (Chapman) Vasey  
Florida and Yucatán Peninsula, native.  
Brush: Campeche, Yucatán and Quintana Roo.
81. A. fournieriana Hitchc.  
Mexico, endemic.  
Brush: Veracruz.
82. A. gentilis Henr.  
Mexico, endemic.  
Pine woods: Sonora, Durango, Zacatecas, Aguascalientes,  
Jalisco, Guanajuato, Mexico, Puebla, Oaxaca and Chiapas.
83. A. glabrata (Vasey) Hitchc.  
Arizona and Mexico, native.  
Dry banks: Sonora, Baja Norte and Baja Sur.
84. A. glauca (Nees) Walp.  
Southern California, Nevada and Utah south to Texas and  
Mexico native.  
Dry banks: All northern border states and south to  
Puebla.
85. Aristida gypsophila Beetle  
Native, endemic.  
Gypsum soils of Coahuila.
86. A. hamulosa Henr.  
Southwestern United States to Guatemala, native.  
Oak forests: Baja Norte, Sonora, Chihuahua, south to  
Chiapas.
87. A. hintoni Hitchc.  
Mexico, endemic.  
Pine savanna: Tamaulipas, Nayarit, Jalisco, Guanajuato,  
Guerrero, Michoacán, Mexico, Guerrero and Oaxaca.
88. A. hitchcockiana Henr.  
Mexico, endemic.  
Pine savanna: Nayarit, Zacatecas, Guanajuato, Queretaro,  
Jalisco, Puebla, Oaxaca (Type loc.).

89. A. jacquiniana Tausch  
Mexico to Ecuador, native.  
Pine savanna: Jalisco and Guanajuato.
90. A. jaliscana Guzmán & Jaramillo  
Mexico, native endemic.
91. A. jorulensis Kunth  
Mexico to Panama, native.  
Dry banks: Sonora, Sinaloa, Nayarit, Jalisco, Colima, Guerrero, Mexico, Oaxaca, Veracruz and Chiapas.
92. A. lagascae Henr.  
Mexican, endemic.  
State of Mexico (Type loc.).
93. A. laxa Cav. var. laxa  
México, endemic.  
Dry banks and dunes: Sonora, Chihuahua, Sinaloa, Nayarit, Jalisco, San Luis Potosí, México, Morelos, Puebla and Oaxaca.
- 93a. A. laxa var. longiramea (Presl) Henr.  
Mexico, endemic.  
Dry banks: Jalisco to Oaxaca.
- 93b. A. laxa var. Karwinskiana (Trin & Rupr.) Henr.  
Mexico, endemic.  
Dry banks: Central Mexico.
94. A. liebmanni Fourn.  
Mexico, endemic.  
Dry banks: Veracruz (Type loc.) Oaxaca and Chiapas.
95. A. longespica Poir.  
New Hampshire to Michigan south to Florida, Texas, Mexico, native.  
Sandy soil: Tamaulipas, Coahuila, Chihuahua.
96. A. longiseta Steud. var. longiseta  
Western U.S. to northern Mexico, native.  
Plains: Baja Norte, Sonora, Chihuahua, Coahuila and Nuevo León and Tamaulipas.
- 96a. A. longiseta var. robusta Merr.  
Western United States and New Mexico to northern Mexico, native.  
Plains: Same ranges as the species but more common northward.
97. A. mexicana Scribn.  
Mexico, endemic.- reported by Henrard (1929) for Guatemala but not confirmed by Swallen (1955).  
Dry banks: Mexico, Distr. Fed. and Puebla.
98. A. orizabensis Fourn.  
Mexico to Panama, native.  
Brush: Sinaloa, Durango, Jalisco, Guanajuato, Michoacán, Mexico, Guerrero, Tlaxcala, Puebla, Veracruz, Oaxaca, Chiapas.
99. A. pansa Woot. & Standl. var. pansa.  
Texas and Arizona south to central Mexico, native.  
Plains: Sonora, Chihuahua, Coahuila, Nuevo León, south to Puebla, Oaxaca.
- 99a. A. pansa var. dissita (Johnston) Beetle.  
Same distribution as the species.
100. A. parishii Hitchc.  
Nevada to California and northern Mexico, native.  
Dry washes: Baja Norte.

101. A. peninsularis Hitchc.  
Mexico, endemic.  
Dunes: Baja California Norte and Sonora.
102. A. purpurascens Poir.  
Massachusetts to Wisconsin and Kansas south to  
British Honduras, native.  
Sandy soil: Coahuila.
103. A. purpurea Nutt.  
Arkansas and Kansas to central Mexico, native.  
Plains: Coahuila, Nuevo León, Tamaulipas, Durango,  
San Luis Potosi, Hidalgo and Puebla.
104. A. purpusiana Hitchc.  
Mexico, endemic.  
Dry wash: Baja California Sur.
105. A. roemeriana Scheele  
Texas and New Mexico to central Mexico, native.  
Plains: northern border States (except. Baja California).  
Durango, Zacatecas, San Luis Potosi, Puebla and  
Yucatán.
106. A. schiedeana Trin. & Rupr.  
Mexico and Guatemala, native.  
Pine savannas throughout Mexico (except. Yucatan Peninsula)
107. A. scribneriana Hitchc.  
Mexico, endemic.  
Brush: Durango, Jalisco, Guanajuato, Michoacan, Guerrero.
108. Aristida tenuifolia Hitchc.  
Mexico, endemic.  
Rocky point, Sulphur Bay. Isla Clarion, Islas Revillagigedo.
109. A. ternipes Cav. var. ternipes  
Southwestern United States, West Indies to Colombia, native.  
Brush: common throughout Mexico.
- 109a. A. ternipes Cav. var. minor (Vasey) Hitchc.  
Same distribution as the species.
110. A. vaginata Hitchc.  
Mexico, endemic.  
Revillagigedo Islands (Socorro Isld.) type loc.
111. A. wrightii Nash.  
Southern California and Colorado, Texas, south to central  
Mexico, native.  
Plains: Chihuahua, Coahuila, Nuevo Leon, south to Oaxaca.
112. Arrhenatherum elatius (L.) Presl var. bulbosum  
(Willd.) Spenner f. striatum (Hubb.) L.B. Smith  
Introduced, cultivated as an ornamental.

## ARTHRAOXON Beauv.

## Andropogoneae

About 20 species in the Old World tropics.

113. A. hispidus (Thunb.) Makino  
Introduced.  
Brush: Chiapas.
114. Arthropogon villosus Nees  
Mexico and Brazil. Introduced or native.  
edge of pine woods, Oaxaca.
115. Arthrostylidium venezuelae (Steud.) McClure.  
Mexico south to Venezuela.  
Reported only for Chiapas.

## ARUNDINELLA Raddi

## Arundinelleae

20 species, pantropical.

116. *A. berteroniana* (Schult.) Hitchc. & Chase

Mexico to Brazil, native.

Brush: Sinaloa, Nuevo Leon, Tamaulipas, San Luis Potosi, Jalisco, Colima, Michoacan, Hidalgo, Mexico, Morelos, Puebla, Guerrero, Veracruz, Oaxaca, Chiapas and Tabasco.

117. *A. confinis* (Schult.) Hitchc. & Chase

Mexico and West Indies south to Panama, native.

Dry banks: Sonora, Jalisco, Michoacan, Mexico, Guerrero, Veracruz, Oaxaca, Chiapas and Tabasco.

118. *A. deppeana* Nees

Mexico and West Indies south to Brazil, native.

Pine savanna: Nuevo Leon, Sinaloa, Nayarit, Jalisco, Colima, Michoacan, Guerrero, Hidalgo, Mexico, Puebla, Veracruz, Oaxaca, Chiapas, Tabasco.

119. *A. palmeri* Vasey

Mexico, endemic.

Dry banks: Sonora, Nayarit, Jalisco, Colima, Michoacan, Mexico, Guerrero, Veracruz.

## ARUNDO L.

## Arundinae

5 - 6 species, Old World, subtropics.

120. *A. donax* L.

Introduced.

Cultivated and adventive throughout Mexico.

- 120a. *Arundo donax* L. f. *versicolor* (Mill.) Beetle

Introduced, cultivated as an ornamental.

121. *Aulonemia laxa* (Maekawa)

Native, central Mexico.

## AVENA L.

## Aveneae

About 10 species, Old World, temperate.

122. *A. barbata* Brot.

Introduced.

Coastal hills: Baja Norte.

123. *A. fatua* L.

Introduced.

Common weed throughout Mexico.

124. *A. sativa* L.

Introduced.

Cultivated and an escape, scattered localities from the northern states south to central Mexico.

## AXONOPUS Beauv.

## Paniceae

about 80 species, tropical and subtropical, New World.

125. *A. affinis* Chase

Southeastern United States, West Indies to Argentina, Native.

Wet places: Jalisco, Queretaro, Hidalgo, Puebla, Veracruz and Chiapas and Campeche.

126. *A. arseni* Swallen

Mexico, endemic.

Wet places: Colima, Michoacan and Distr. Federal.

127. A. ater Chase  
Mexico, endemic.  
Wet places: Veracruz.
128. A. centralis Chase  
Mexico, endemic.  
Wet places: Nayarit, Jalisco and Colima; also Chiapas.
129. A. chrysites (Steud.) Kuhlmann.  
Mexico and Central America, native.  
Wet places: "Mex. Galeotti" acc. to Black, 1963, Chiapas.
130. A. compressus (Sw.) Beauv.  
Pan-tropical (native).  
Wet places: often cultivated, common throughout Mexico
131. A. deludens Chase  
Mexico, endemic.  
Wet places: Jalisco and Sinaloa
132. A. elongatus Swallen  
Mexico and Guatemala, native.  
Wet places: Chiapas.
133. A. mexicanus Black  
Mexico, endemic.  
Wet places: Sinaloa.
134. A. multipes Swallen  
Mexico, endemic.  
Wet places: Veracruz.
135. A. poiophyllus Chase  
Mexico to Honduras, native.  
Wet places: Tamaulipas, Veracruz and Chiapas.
136. A. purpusii (Mez) Chase  
Mexico to Argentina, native.  
Wet places: Veracruz, Oaxaca, Chiapas, Tabasco, Puebla.
137. A. reederi Black  
Mexico, endemic.  
Wet places: Chiapas.
138. A. rosei (Scribn. & Merr.) Chase  
Mexico, endemic.  
Wet places: Nayarit.
139. A. scoparius (Flügge) Kuhlmann.  
Mexico to Peru (acc. to Black, 1963), native.  
Wet places, "Mex. Galeotti 227" (acc. to Black, 1963).

## BAMBUSA Schreb.

## Bambuseae

- 100 or more in the Old World tropics and in the  
New World tropics as Section Guadua.
140. B. (Guadua) aculeata (Rupr.) Hitchc.  
Mexico south to Panama, native.  
Tropical forest margin, San Luis Potosi, Veracruz,  
Campeche, Guerrero, Puebla, and Oaxaca.
141. B. (Guadua) amplexifolia (Presl) R.T.S.  
Mexico to Colombia and Venezuela.  
Tropical forest margin, Tamaulipas and San Luis Potosi  
south to Chiapas and Tabasco.
142. Bambusa latifolia HBK  
Native, Mexico, Trinidad, and northern South America  
south to Brazil.  
Reported from San Luis Potosi and Veracruz.

143. *B. (Guadua) longifolia* (Fourn.) McClure  
Mexico, endemic.  
Thickets, Sonora and Chihuahua south to Chiapas and Campeche.
144. *Bambusa paniculata* (Munro) Hack.  
Native, Mexico and Central America south to Brazil.  
Reported from Jalisco, Nayarit, and Veracruz.
145. *B. vulgaris* Schrad.  
Introduced.  
Cultivated, scattered localities throughout Mexico.
- 145a. *Bambusa vulgaris* Schad. f. *vittatae* (A. & C. Rive.) Beetle  
*B. vulgaris* var. *vittata* A. & C. Riv. Bull. Soc. Acclim.  
III. 5:640. 1878.  
Introduced, cultivated as an ornamental.

## BLEPHARIDACHNE Hack

Eragrosteae

2 species, North America.

146. *B. bigelovii* (S.Wats.) Hack.  
Texas and northern Mexico, native.  
Chihuahuan desert: Coahuila.

## BLEPHARONEURON Nash

Eragrosteae

One species, North America.

147. *B. tricholepis* (Torr.) Nash  
Colorado and Utah south to central Mexico, native.  
Pine woods: northern border states south to Puebla.

## BOTHRIOCHLOA

Andropogoneae

About 30 species, tropic and subtropics of the world.

148. *B. alta* (Hitchc.) Henr.  
Texas and New Mexico, south to Bolivia and Argentina, native.  
Dry banks: Durango, Zacatecas, San Luis Potosi, Jalisco, Guanajuato, Queretaro, Oaxaca, Chiapas.
149. *B. barbinodis* (Lag.) Herter var. *barbinodis*  
California, Colorado and Texas south to central Mexico;  
Argentina and Uruguay, native.
- 149a. *Bothriochloa barbinodis* var. *palmeri* (Hack.) Gould.  
Native, endemic.  
Reported from Durango, Zacatecas, Jalisco, Guanajuato, and Michoacan.
- 149b. *B. barbinodis* var. *perforata* (Trin.) Gould  
Same distribution as the sp-cies.
150. *Bothriochloa bladhi* (Retz.) Blake  
Introduced.  
Reported from Yucatan.
151. *B. hyrida* (Gould) Gould  
Texas and Mexico, native.  
Dry banks: Coahuila, Nuevo Leon, & Tamaulipas, San Luis Potosi, and Oaxaca.
152. *B. ischaemum* (L.) Keng var. *songarica* (Rupr.) Cel. & Henr.  
Introduced.  
Cultivated & escaped: Nuevo Leon, Tamaulipas, Michoacan.
153. *B. pertusa* (L.) Camus  
Introduced.  
Dry banks: Tamaulipas, San Luis Potosi, Campeche and Yucatan.
154. *B. reevesii* (Gould) Gould  
Mexico, endemic.  
Dry banks: Coahuila

155. B. saccharoides (Sw.) Rydb. var. saccharoides.  
Southwestern United States and West Indies to Argentina,  
native.  
Dry banks: common throughout Mexico except for the Yucatan  
Peninsula.
- 155a. B. saccharoides var. laguroides (DC) Beetle  
Same distribution as the species, native.
- 155b. B. saccharoides var. longipaniculata (Gould) Gould  
Texas to Panama, native.  
Dry banks: Nuevo Leon.
156. B. springfieldii (Gould) Parodi  
United States and Mexico, native.  
Dry banks: Nayarit.

## BOULETELOUA Lag.

## Chlorideae

- Species about 40 in the Americas.
157. B. alamosana Vasey  
Mexico, endemic.  
Rocky banks: Sonora (Type loc.) also Zacatecas, Jalisco  
Oaxaca & Chiapas.
158. Bouteloua americana (L.) Scribn.  
Native, Caribbean and Mexico south to Brazil.  
Reported only for the Yucatan Peninsula.
159. B. annua Swallen  
Mexico, endemic.  
Dry banks: Baja Sur (Type loc.)
160. B. aristidoides (HB) Griseb.  
(including B. aristidoides var. arizonica Jones).  
Texas to southern California, Mexico and South America,  
native.  
Dry soils: northern border states south to Oaxaca.
161. B. barbata Lag. var. barbata  
Colorado and Utah south to Mexico; Argentina, native.  
Dry soils: northern border states south to Oaxaca.
- 161a. Bouteloua barbata var. major (Vasey) Beetle  
(B. rothrockii (Cervant) Swallen)  
Southern California and Arizona to northern Mexico.  
Native: Mesas; Sonora, Chihuahua, Coahuila, Nuevo  
Leon, Sinaloa, Durango and Baja Sur, Jalisco.
- 161b. Bouteloua barbata var. sonorae (Griffiths) Gould  
Mexico, endemic.  
Dry washes: Sonora, Sinaloa and Baja Sur.
162. B. breviseta Vasey  
U.S. and Mexico, native.  
Dry washes: Chihuahua, Coahuila, Nuevo Leon, Durango,  
Zacatecas, San Luis Potosi, and Veracruz.
163. B. chasei Swallen  
Mexico, endemic.  
Gypsum: Coahuila, Nuevo Leon, Zacatecas and San Luis  
Potosi.
164. B. chondrosioides (HBK) Benth.  
Texas and Arizona south to Honduras, native.  
Rocky slopes: Sonora and Chihuahua northern border  
states south to Chiapas.
165. B. curtispindula (Michx.) Torr. var. curtispindula  
Canada to central Mexico, native.  
Grassland: northern border states south to central  
Mexico.



- 165a. B. curtispindula var. caespitosa Gould and Kapadia  
U.S. and Mexico; Venezuela to Argentina, native.  
Dry banks: northern border states south to Chiapas.
- 165b. B. curtispindula var. tenuis Gould and Kapadia  
Mexico, endemic.  
Dry banks: Chihuahua south to Chiapas.
166. B. distans Swallen  
Mexico, endemic.  
Dry banks: Oaxaca (Type loc.); Nuevo Leon
167. B. disticha (Kunth) Benth.  
Mexico and West Indies to Peru and Argentina, native.  
Dry banks: Nayarit, Jalisco, Michoacan, and Guerrero,  
Tamaulipas, Mexico, Oaxaca, Campeche, & Yucatan
168. B. elata J. & C. Reeder  
Mexico, endemic.  
Rocky cliffs: Nayarit, Jalisco, Colima and Chiapas.
169. B. eludens Griffiths  
U.S. and Mexico, native.  
Dry banks: Sonora.
170. B. eriopoda (Torr.) Torr.  
U.S. and northern Mexico, native.  
Dry slopes: Sonora, Chihuahua, Coahuila, Nuevo Leon and  
Durango.
171. B. eriostachya (Swallen) Reeder  
Mexico, endemic.  
Dry banks: Coahuila
172. B. gracilis (HBK) Lag. var. gracilis  
U.S. and Mexico; native; South America (introduced).  
Grasslands: northern border states to Oaxaca.
- 172a. Bouteloua gracilis var. major (Vasey) Beetle  
Native, endemic.  
Reported from Aguascalientes, Jalisco, Guanajuato  
and Hidalgo.
- 172b. Bouteloua gracilis var. polystachya (Nees) Beetle  
Native, endemic.  
Central Mexico.
- 172c. Bouteloua gracilis var. stricta (Vasey) Hitchc.  
Native, endemic.  
Reported from San Luis Potosi, Durango and Chihuahua.
173. B. hirsuta Lag. var. hirsuta  
U.S. and Mexico, native.  
Thickets: throughout Mexico except for the Yucatan  
Peninsula.
- 173a. Bouteloua hirsuta Lag. var. palmeri Vasey  
Mexico and Guatemala, native.  
Limestone balds: Sonora, Chihuahua and Baja Sur  
south to Chiapas.
174. B. johnstonii Swallen  
Mexico, endemic.  
Gypsum: Coahuila.
175. B. Karwinskii (Fourn.) Griffiths  
Mexico, endemic.  
Gypsum: Coahuila, Nuevo Leon, Tamaulipas, Zacatecas,  
San Luis Potosi and Tamaulipas.

176. B. media (Fourn.) Gould and Kapadia  
Mexico, endemic.  
Dry slopes: Nayarit, San Luis Potosi, Colima, Michoacan, Veracruz, Mexico, Morelos, Guerrero, Oaxaca and Chiapas.
177. B. parryi (Fourn.) Griffiths var. parryi  
New Mexico and Arizona to México, native.  
Rocky slopes: northern border states south to Guanajuato.
- 177a. Bouteloua parryi var. gentryi (Gould) Gould  
Mexico, endemic.  
Dry banks: Durango, Sinaloa (Type loc.).
178. B. pedicellata Swallen  
Mexico, endemic.  
Rocky slopes: Tlaxcala and Puebla (Type loc.).
179. B. purpurea Gould and Kapadia  
Mexico, endemic.  
Heavy black soils: central mountains.
180. B. radicata (Fourn.) Griffiths  
Southern New Mexico and southern California to Mexico, native.  
Dry slopes: northern border states south to Oaxaca.
181. Bouteloua ramosa Vasey  
Limestone flats and slopes, Texas and northern Mexico.  
Reported from Chihuahua, Durango, Coahuila, Zacatecas, and Nuevo Leon.
182. B. reflexa Swallen  
Mexico, endemic.  
Dry washes: Sonora, Sinaloa, Baja California Sur and Nayarit.
183. B. repens (HBK) Scribn. & Merr.  
(including B. filiformis (Fourn.) Griffiths.  
Texas to Arizona, West Indies to Venezuela and Colombia, native.  
Dry slopes: common throughout Mexico.
184. B. rigideseta (Steud.) Hitchc.  
Oklahoma and Texas and northern Mexico, native.  
Grassland: Sonora, Coahuila, Nuevo Leon and Tamaulipas.
185. B. scorpioides Lag.  
Mexico, endemic.  
Dry flats: Chihuahua and Nuevo Leon south to Puebla, Oaxaca.
186. B. simplex Lag.  
Southwestern United States to Argentina, native.  
Dry flats: northern border states south to Veracruz and Oaxaca.
187. B. triaena (Trin.) Scribn.  
Mexico and Guatemala, native.  
Thickets: Coahuila and Sinaloa south to Yucatan, Peninsula.
188. B. trifida Thurb.  
Texas to California and northern Mexico, native.  
Grasslands: northern border states south to Guanajuato.
189. B. uniflora Vasey var. uniflora.  
United States and northern Mexico, native.  
Rocky slopes: Nuevo Leon and Coahuila.
190. B. uniflora var. coahuilensis Gould and Kapadia  
Mexico, endemic.

Rocky slopes: Coahuila, Nuevo Leon, Tamaulipas, Zacatecas, San Luis Potosi, and Aguascalientes.

191. B. williamsii Swallen

Mexico to Honduras, native.

Rocky slopes: Zacatecas, Nayarit, Jalisco, Guerrero, Oaxaca and Chiapas.

BRACHIARIA Griseb.

Panicaceae

About 15, tropics and subtropics of the world.

192. Brachiaria arizonica (Scribn. & Merr.) Black

U.S. and Mexico, native.

Sandy soil: Baja California, Sonora, Chihuahua and Coahuila, Sinaloa, Durango, Oaxaca and Chiapas.

192a. Brachiaria arizonica var. major (Vasey) Beetle

Nativa. endemic.

Reported for Chihuahua and Sinaloa.

193. Brachiaria brizantha (Hochst.) Stapf.

Introduced, cultivated

Reported from Puebla and Yucatan.

194. B. ciliatissima (Buckl.) Chase

Arkansas, Oklahoma, Texas and Mexico, native.

Sandy soils: Tamaulipas and Nuevo Leon.

195. Brachiaria distachya (L.) Stapf

Introduced, cultivated or escaped.

Reported from Nuevo Leon, Jalisco, Veracruz and Yucatan.

196. Brachiaria fasciculata (Sw.) Parodi var. fasciculata

U.S., Wets Indies, Mexico south of Brazil, native.

weedy, common throughout Mexico.

196a. Brachiaria fasciculata var. reticulata (Torr.) Beetle

Same distribution as var. fasciculata.

197. B. meziana Hitchc.

Mexico, endemic.

Sandy soils: Chihuahua, to Tamaulipas and south to Oaxaca.

198. Brachiaria mollis (Sw.) Parodi

Mexico and West Indies south to Argentina, native.

coastal plain: Sinaloa south to Chiapas, Veracruz to Yucatan, native.

199. Brachiaria mutica (Forsk.) Stapf

Pantorpica (introduced in the Americas)

Cultivated and escaped, grown throughout Mexico.

200. B. ophyroides Chase

Mexico, endemic.

Sandy soils: Tamaulipas and Nuevo Leon.

201. B. plantaginea (Link) Hitchc.

United States (where introduced); Mexico to Bolivia and Brazil, native.

Sandy soils: Durango to Tamaulipas and south to Chiapas.

202. B. platyphylla (Griseb.) Nash

U.S., Cuba and Mexico, native.

Wet places: reported for Mexico by Gould (1975).

203. Brachiaria texana (Buckl.) Black  
U.S. and Mexico, native.  
Weedy, Nuevo Leon and Tamaulipas.

## BRACHYPODIUM Beauv.

Festuceae

About 15 species in the Old World; two in subtropical America.

204. Brachypodium distachyon (L.) Beauv.  
205. Brachypodium latifolium Fourn.  
Native, endemic.  
Reported from Jalisco, Mexico, Veracruz and Oaxaca.  
206. B. mexicanum (R. & S.) Link  
Mexico to Bolivia, native.  
Dry banks: common from Baja California Sur to Tamaulipas and south to Chiapas.  
206a. Brachypodium mexicanum var. inerme Beetle  
Native, endemic.  
Reported from Nuevo Leon and Tamaulipas.  
207. B. pringlei Scribn.  
Mexico, endemic.  
Dry banks: Coahuila, Nuevo Leon, and Tamaulipas.

## BRIZA L.

Festuceae

Three annuals in the Old World; about 15 New World. perennials.

208. B. minor L.  
Introduced.  
Roadsides: Jalisco, Mexico, Puebla and Veracruz  
209. B. subaristata Lam.  
Mexico and Guatemala, native.  
Pine savanna: Nuevo Leon and Tamaulipas south to Chiapas.

## BROMUS L.

Brachypodeae

About 100 species, temperate zone world-wide.

210. B. anomalus Rupr.  
United States and Mexico, native.  
Pine savanna: northern border states south to Veracruz and Oaxaca.  
211. Bromus arenarius Labill.  
Introduced from Australia.  
sandy roadside, reported only from Baja California Norte  
212. B. arizonicus (Shear) Stebbins  
United States and Mexico, native.  
Dry washes: Nuevo Leon and Baja Norte and Sonora.  
213. B. attenuatus Swallen  
Mexico, endemic.  
Pine savanna: Nuevo Leon and Hidalgo.  
214. B. carinatus H. & A.  
United States to central America, native.  
Pine savanna: common throughout Mexico.  
215. B. ciliatus L.  
Canada and United States south to northern Mexico, native.  
Pine savanna: Baja Norte, Sonora, Chihuahua, Nuevo Leon, Zacatecas and Jalisco.  
216. B. densus Swallen  
Mexico, endemic.  
Pine savanna: Coahuila, Nuevo Leon and Tamaulipas

217. B. diandrus Roth  
Introduced.  
Roadsides: Baja Norte, Puebla.
218. B. dolichocarpus Wagnon  
Mexico, endemic.  
Pine savanna: Colima, Jalisco, Michoacan, Hidalgo,  
Mexico, Morelos and Oaxaca.
219. Bromus exaltatus Bernh.  
Southern Mexico to Panama, native.  
Jalisco and San Luis Potosi south to Chiapas.
220. Bromus inermis Leyss.  
Introduced and cultivated.  
Experimental plots. e.g. in Coahuila.
221. B. lanatipes (Shear) Rydb.  
(including B. pinetorum Swallen)  
U.S. and northern Mexico, native.  
Pine savanna: Coahuila.
222. Bromus madritensis L.  
Introduced from the Mediterranean Region.  
Reported only for Baja California Norte.
223. B. marginatus Nees  
Canada to northern Mexico, native.  
Pine savanna: Nuevo Leon, Sonora, and Baja California  
Norte.
224. B. meyeri Swallen  
Mexico, endemic.  
Pine savanna: Nuevo Leon.
225. B. mollis L.  
Introduced.  
Dry hills: Baja California Norte.
226. B. mucroglumis Wagnon  
(including B. thysanoglottis Soderstrom & Beaman).  
Mexico, endemic.  
Pine savanna: Chihuahua, Durango and Baja California  
Sur, Coahuila, Nuevo Leon.
227. B. porteri (Coul.) Nash  
Canada to Mexico, native.  
Pine savanna: northern border states south to  
Chiapas and Campeche.
228. B. rubens L.  
Introduced.  
Dry hills: Baja California Norte.
229. Bromus sterilis L.  
Introduced from the Mediterranean Region.  
Reported only for Baja California Norte.
230. B. tectorum L. and var. glabratus Spenner.  
Introduced.  
Dry hills: Baja California Norte. and Chihuahua.
231. b. trinii Desv.  
California and northern Mexico; Chile, native.  
Coastal hills: Baja California Norte.

232. B. unioides HBK.

Introduced.

Ditches and cultivated: Chihuahua, Coahuila, Nuevo Leon, San Luis Potosi, Hidalgo and Mexico.

233. B. willdenowii Kunth var. willdenowii

Introduced.

Ditches and cultivated: northern border states south to Chiapas.

233a. Bromus willdenowii Kunth var. lasiophyllus (Goiran.)

Beetle

Introduced.

## BUCHLOE Engelm.

Chlorideae

One species in North America.

234. B. dactyloides (Nutt.) Engelm.

Grassland: northern border states south to central mountains.

## BUCHLOMINUS R. &amp; R.

Chlorideae

One, endemic to Mexico.

235. B. nervatus (Swallen) R. & R.

Mexico, endemic.

Hidalgo and Mexico.

## CALAMAGROSTIS Adans.

Agrostideae

About 150 species, temperate, worldwide.

236. C. erectifolia Hitchc.

Jalisco, endemica.

236a. C. eriantha (HBK) Steud.

Mexico, endemic.

Pine savanna: Mexico, Puebla, Veracruz and Oaxaca.

237. C. intermedia (Presl) Steud.

Native, Mexico to Peru.

Reported only from the State of Mexico.

238. C. junciformis (HB) Steud.

Mexico and Guatemala, native.

Mountain slopes: "Nevado de Toluca", type loc.

239. C. orizabae (Rupr.) Steud.

Mexico, endemic.

Mountain slopes: "Mount Orizabae", type loc.

240. C. pringlei BealMexico (endemic; closely related to C. guatemalensis Hitchc.)

Mountain slopes: Chihuahua, Nuevo Leon, Jalisco, Hidalgo, &amp; Michoacan.

241. C. rigescens (Presl) Scribn.

Native, Mexico and South America.

Reported only from Cofre de Perote, Veracruz.

242. C. tolucensis (HB)Trin.  
Mexico, endemic.  
Mountain slopes: central mountains.
243. C. valida Sohns  
Mexico, endemic.  
Mountain slopes: Jalisco.
244. C. vulcanica Swallen  
Mexico and Guatemala.  
Mountain slopes: "Vulcan Tacana" Michoacan is in Chiapas".

## CATHESTECUM Presl

## Chlorideae

Species six, North and Central America.

245. C. brevifolium Swallen  
Mexico and Central America, native.  
Dry slopes: Sonora and Chihuahua south to Chiapas.
246. C. erectum Vasey and Hack.  
Texas to Arizona and adjacent Mexico, native.  
Dry slopes: Chihuahua.
247. C. prostratum Presl  
Mexico, endemic.  
Dry slopes and flats: Queretaro, Jalisco, Morelos, Puebla, Guerrero and Oaxaca.
248. C. varium Swallen  
Mexico, endemic.  
Dry slopes: Puebla, Oaxaca and Jalisco.

## CENCHRUS L.

## Paniceae

Species about 20, worldwide.

249. C. brownii R. & S.  
Florida and West Indies to Bolivia and Brazil, native.  
Sandy soil: Baja Sur and Nayarit; Nuevo Leon and Tamaulipas; south to the Yucatan Peninsula.
250. C. ciliaris L.  
Introduced? (closely related to C. multiflorus Presl which is said to be native).  
Ditches and cultivated: common throughout Mexico.
251. C. echinatus L.  
Southern United States, West Indies to Argentina, native.  
Ditches: common throughout Mexico.
252. C. incertus Curtis  
Southern United States, West Indies to South America, native.  
Ditches: common throughout Mexico.
253. C. longispinus (Hack.) Fernald  
United States and West Indies to Venezuela, native.  
Ditches: Sonora, Durango, Tamaulipas and Campeche, Guanajuato, Michoacan & Oaxaca.
254. C. multiflorus Presl  
Native? (closely related to C. ciliaris L. which is said to be introduced); also in Central America.  
Dry flats: southern Sonora and southern Chihuahua south along the west coast of Mexico to Chiapas.

255. C. myosuroides HBK  
Florida and West Indies south to South America, native.  
Northern border states south to Veracruz and Oaxaca.
256. C. palmeri Vasey  
Mexico, endemic.  
Sandy soils: Baja Norte, Baja Sur and Sonora (Tipe loc.)  
Sinaloa.
257. C. pilosus HBK  
Mexico south to Peru, native.  
Dry slopes: Nayarit, Jalisco, Colima south and east  
to Yucatan.

## CHABOISSAEA Fourn.

## Eragrosteae

- One species, endemic.
258. C. ligulata Fourn.  
Mexico, endemic.  
Dry slopes: Chihuahua south to Mexico
259. C. bromoides (Presl) Benth.  
Mexico and Central America, native.  
Dry slopes: Chihuahua south to Campeche.
260. Chasmanthium latifolium (Michx.) Yates  
U.S.A. and Mexico, native.  
Nuevo Leon, Veracruz, dunes costeras.

## CHLORIS Sw.

- 70 species, subtropics, worldwide.
261. C. andropogonoides Fourn.  
Texas and northern Mexico, native  
Ditches: Coahuila, Nuevo Leon, Tamaulipas and San Luis  
Potosi.
262. C. aristata (Cervantes) Swallen  
Mexico and Central America, native.  
Coahuila, Nuevo Leon, south to Chiapas.
263. C. brandegei (Vasey) Swallen  
Mexico, endemic.  
Arroyos: Baja California Norte and Baja California Sur.
264. C. chloridea (Presl) Hitchc.  
U.S. and Mexico to Central America, native.  
Dry slopes: Baja California and Sonora south to  
Chiapas; Nuevo Leon, Tamaulipas, San Luis Potosi  
south to Chiapas.
265. C. ciliata Sw.  
U.S., West Indies and Mexico to Argentina, native.  
Grassland: Coahuila, Nuevo Leon, Tamaulipas south  
to Yucatan Peninsula.
266. C. ciliata Lag.  
Texas south to Argentina, native.  
Dry washes: Sonora, Chihuahua, Coahuila, Nuevo Leon,  
Baja California Sur, Durango and San Luis Potosi.
267. C. cucullata Bisch.  
Texas and northern Mexico, native.  
Ditches: Coahuila, Nuevo Leon and Tamaulipas.



268. Chloris dandyana Adams.  
Native, subtropics of North and South America.  
Scattered localities throughout Mexico.
269. C. gayana Kunth  
Introduced.  
Cultivated and escaped: scattered locations  
throughout Mexico.
270. C. inflata Link  
Pantropical and subtropics, introduced.  
Dry washes: Sonora, Chihuahua, Nayarit, Jalisco,  
Tamaulipas, Veracruz and the Yucatan Peninsula.
271. C. pluriflora (Fourn.) Clayton  
Texas, Mexico, Central and South America, native.  
Dry washes: Coahuila, Nuevo Leon, Tamaulipas, San  
Luis Potosi, Jalisco, Michoacan, Oaxaca, Campeche.
272. C. radiata (L.) Sw.  
West Indies and Mexico to Paraguay, native.  
Ditches: Nuevo Leon, Chihuahua, San Luis Potosi,  
Guanajuato, Colima, Veracruz and Oaxaca.
273. C. subdolichostachya Muller  
Texas and northern Mexico, native.  
Sandy soils: Coahuila, Nuevo Leon and Tamaulipas.
274. C. submutica HBK  
Mexico, endemic.  
Dry washes: common from the northern border states  
south to Chiapas.
275. C. verticillata Nutt.  
United States to northern Mexico, native.  
Plains: reported only from Coahuila.
276. C. virgata Sw.  
Pantropical, native. (U.S., West Indies south to  
Argentina).  
Ditches: common throughout Mexico.

## CHUSQUEA

## Bambuseae

- About 100 species in the Americas.
277. C. bilimeki Fourn.  
Mexico, endemic.  
Thickets: San Luis Potosi, Mexico and Veracruz.
278. C. carinata Fourn.  
Mexico, endemic.  
Thickets: Veracruz.

279. C. circinata Soderstrom & Calderon  
Reported from Jalisco Michoacan (Type loc.) and Jalisco.
280. C. coronalis Soderstrom & Calderon  
Subtropics, Mexico.
281. C. galeottiana Rupr.  
Mexico, endemic.  
Thickets: Guerrero, Oaxaca (Type loc.) and Chiapas.
282. C. lanceolata Hitchc.  
Reported for Chiapas.
283. C. liebmannii Fourn.  
Mexico, endemic.  
Thickets: Sinaloa, Oaxaca (Type loc.) and Chiapas.
284. C. longifolia Swallen  
Southern Mexico to Panama, native.  
Thickets: Sinaloa to Chiapas along the West Coast.
285. C. muelleri Munro  
Mexico, endemic.  
Thickets: Veracruz.
286. C. nelsonii Scribn. & Smith  
Mexico, endemic.  
Thickets: Guerrero (Type loc.).
287. C. pittieri Hack.  
Chiapas, Guerrero.
288. C. serrulata Pilger  
Mexico, endemic.  
Thickets: Chiapas.
289. C. simpliciflora Munro  
Mexico and Guatemala, native.  
Thickets: "Mexico" according Swallen: Grasses of Guatemala.
290. C. spinosa Fourn.  
Mexico, endemic.  
Thickets: Puebla.
291. C. sulcata Swallen  
Mexico, endemic.  
Thickets: Chiapas.

## CINNA L.

## Agrostideae

3 species, one in N. America and Eurasia, one in N. Am.  
and one in Mexico south to South America.

292. C. poaeformis (HBK) Scribn. & Merr.  
Mexico, Costa Rica, Panama, Colombia, Venezuela, Peru,  
native.  
Pine savanna: Hidalgo, Mexico, Morelos, Puebla, Veracruz,  
Oaxaca, Chiapas.

## COELORACHIS Brongn.

## Andropogoneae

Tropics of the World, about 25 species.

293. C. ramosa (Fourn.) Nash  
Mexico to Panama and Colombia, native.  
Ditches: Michoacan, Mexico, Veracruz, Chiapas,  
Tabasco and Campeche.

- COIX L. Andropogoneae  
4 in the Old World tropics.
294. C. lacryma-jobi L.  
Introduced.  
Cultivated and escaped: scattered localities throughout Mexico, Coahuila, Nuevo Leon, Veracruz, Oaxaca, Chiapas, Tabasco and Yucatan.
- CORTADERIA Stapf Arundinae  
15 species in South & America.
295. C. selloana (Schult.) Aschers. & Graebn.  
Introduced.  
Cultivated as an ornamental: throughout Mexico.
- COTTEA Kunth Pappophoreae  
One species, New World.
296. C. pappophoroides Kunth  
Bicentric: U.S. and Mexico; Ecuador to Peru and Argentina, native.  
Dry slopes: northern border states south to Oaxaca.
- CRYPTOCHLOA Swallen Olyreae  
4 species in Mexico, Central and South America.
297. C. gramulifera Swallen  
Mexico to Ecuador, native.  
Tropical forest: Veracruz and Chiapas.
298. C. strictiflora (Fourn.) Swallen  
Mexico, endemic.  
Tropical forest: Veracruz.
- CTENIU Panzer Chlorideae  
20 species, world tropics.
299. C. planifolium (Presl) Kunth  
Mexico, endemic.  
Brush: Oaxaca and Chiapas.
300. C. plumosum (Hitchc.) Swallen  
Mexico, endemic.  
Brush: Sinaloa and Nayarit, Jalisco.
- CYCLOSTACHYA Reeder and Reeder Chlorideae  
One species in Mexico.
301. C. stolonifera (Scribn.) Reeder and Reeder  
Mexico, endemic.  
Dry flats: Zacatecas, San Luis Potosi, Aguascalientes, Hidalgo and Mexico.
- CYMBOPOGON Spreng. Andropogoneae  
About 60 species in the Old World tropics.
302. C. citratus (DC) Stapf  
Introduced.  
Persistent after cultivation: Nuevo Leon, Jalisco, Veracruz, Oaxaca, Chiapas, Tabasco and Yucatan.

303. *C. nardus* (L.) Rendle

Introduced.

Persistent after cultivation: Nuevo Leon, Oaxaca and Yucatan.

CYNODON L. Rich.

Chlorideae

6 species, one pantropical, others African.

304. *C. dactylon* (L.) Pers.

Pantropical, native.

Common throughout Mexico.

305. *C. dactylon* (L.) Pers. f. *vivipara* Beetle

Found in Tamaulipas.

306. *C. nlemfuensis* Vanderyst

Introduced from Africa, cultivated and escaped.

Reported from Veracruz and Yucatan.

307. *C. plectostachyum* (Schum.) Pilger

Introduced.

Persistent after cultivation: scattered localities throughout Mexico.

DACTYLIS L.

Festuceae

About 5 species, temperate, Old World.

308. *D. glomerata* L.

Introduced.

Persistent after or escaped from cultivation: Coahuila, San Luis Potosi, Veracruz, Mexico, Puebla, Oaxaca and Chiapas.

DACTYLOCTENIUM Willd.

Chlorideae

13 Old World species, subtropical.

309. *D. aegyptium* (L.) Willd.

Introduced.

Common weed throughout Mexico.

- 309a. *Dactyloctenium aegyptium* f. *vivipara* Beetle

Found in Sonora.

310. *Dactyloctenium aristatum* Link

A seashore grass introduced from Africa.

Reported from Yucatan.

311. *Dactyloctenium geminatum* Hack.

Introduced from Africa.

Reported from Guerrero, Campeche and Quintana Roo.

312. *Dactyloctenium scindicum* Boiss.

Introduced from Africa.

Coastal, Baja California Sur and Yucatan.

DANTHONIA Lam. & DC.

Danthoneae

100 species, temperate, worldwide.

313. *D. filifolia* Hubbard

Mexico, endemic.

Pine savanna: Puebla (Type loc.) and Chiapas.

314. *D. spicata* (L.) Beauv.

Canada to northern Mexico, native.

Reported from Coahuila and Veracruz.

## DESCHAMPASIA Beauv.

## Aveneae

50 species, temperate, worldwide.

315. *D. danthonioides* (Trin.) Munro  
Alaska to Baja California: Chile, native.  
Moist places: Baja Norte only.
316. *D. elongata* (Hook.) Munro  
Alaska to central Mexico; Chile, native.  
Mt. slopes: Jalisco, Hidalgo, Mexico, Morelos and Veracruz.
317. *D. flexuosa* (L.) Trin.  
Amphiatlantic, south in mountain to Mexico, native.  
Mountain slopes: Chihuahua, Nuevo Leon and Durango.
318. *D. liebmänniana* (Fourn.) Hitchc.  
Mexico, endemic.  
Central mountains: Jalisco Michoacan, Mexico and Puebla.
319. *D. straminea* Hitchc.  
Mexico, endemic.  
Central mountains: Mexico and Puebla.

## DICHANTHIUM Willemet

## Andropogoneae

10 species, Old World subtropics.

320. *D. annulatum* (Forsk.) Stapf  
Introduced.  
Cultivated and escaped: Chihuahua, Chiapas, San Luis Potosi and Quintana Roo.
321. *D. aristatum* (Poir.) C.E. Hubb.  
Introduced.  
Cultivated and escaped: Nuevo Leon and Tamaulipas.
322. *D. sericeum* (R.Br.) Camus  
Introduced.  
Cultivated and escaped: Sonora, Tamaulipas.

## DIECTOMIS HBK

## Andropogoneae

all species in the Americas.

323. *D. angustata* Presl  
Native, Mexico, Central America and northern South America.  
Reported from Chiapas.
324. *D. fastigiata* (Sw.) HBK.  
Pantropical, native.  
Thickets: Tamaulipas, Sonora, Sinaloa, Nayarit, Jalisco, Colima, Michoacan, Mexico, Morelos, Guerrero, Oaxaca, Chiapas.
325. *D. laxa* Nees  
Cuba and Mexico, south to northern Brazil, native.  
Pine savanna: Sinaloa south to Chiapas, Guerrero.

## DIGITARIA Heist.

## Paniceae

300 species, worldwide, temperate and tropical.

326. *D. badia* (Scribn. & Merr.) Fernald  
Reported for Sierra de San Felipe, Oaxaca and Jalisco.
327. *D. bicornis* (Lam.) R. & S.  
Pantropical, introduced?  
Mexico, a common weed at lower elevations.
328. *D. biformis* Willd.  
Introduced from Asia.  
Disturbed land, throughout Mexico.
- 328a. *D. biformis* Willd. var. *chrysoblepharis* (Fig. & D. Not.)  
Beetle.

329. D. californica (Benth.) Henr.  
U.S. south to Bolivia and Argentina.  
Dry slopes: northern border states south to Puebla.
330. D. cayoensis Swallen  
Mexico and British Honduras.  
Brush: Yucatan and Chiapas.
331. D. ciliaris Retz.  
Pantropical, native.  
Common weed throughout Mexico.
332. D. curtigluma Hitchc.  
Mexico to Panama.  
Brush: Jalisco, Michoacan, Mexico, Puebla, Oaxaca and Chiapas.
333. D. distans (Chase) Fernald  
Mexico, endemic.  
Pond margin: Jalisco.
- 333a. D. filiformis (L.) Koel. E.U.A. & Mexico, native.
334. D. hitchcockii (Chase) Stuckert  
Texas and New Mexico, native.  
Dry slopes: Coahuila, Nuevo Leon, Tamaulipas and San Luis Potosi, also Oaxaca.
335. D. horizontalis Willd.  
Pantropical, native?  
Weedy: Sinaloa, Nayarit, Jalisco, Colima, Michoacan, Nuevo Leon, Tamaulipas, San Luis Potosi, Veracruz, Guerrero, Oaxaca, Chiapas, Yucatan and Quintana Roo.
336. D. insularis (L.) Mez  
United States, Mexico, West Indies south to Argentina, native.  
Brush: common throughout Mexico except for Baja California and central mountains.
337. D. leucites (Trin.) Henr. var. leucites  
Mexico and Guatemala, native.  
Dry banks: Nuevo Leon, San Luis Potosi, Jalisco, Michoacan, Mexico, Morelos, Puebla, Veracruz and Chiapas.
338. D. leucites var. glabella (Chase) Henr.  
Mexico, endemic.  
Dry banks: Veracruz and Michoacan.
339. D. leucocoma (Nash) Urban  
Florida, West Indies and Mexico, native.  
Dry banks: Mexico and Veracruz.
- 339a. D. obtusa Swallen  
Southern Mexico to Guatemala, native.  
Dry banks: Morelos, Veracruz, Oaxaca and Chiapas.
340. D. panicea (Sw.) Urban  
Eastern United States south to Mexico, native.  
Weedy: Chihuahua, Coahuila, Durango, Zacatecas, Jalisco, Oaxaca and Chiapas.
341. D. patens (Swallen) Henr.  
Texas and northern Mexico, native.  
Sandy soil: Sonora, Coahuila and Nuevo Leon.

342. *D. pentzii* Stent. var. minor Stent.  
Introduced.  
Persistent after cultivation: Tamaulipas, San Luis Potosi, Queretaro, Nayarit, Veracruz, Tabasco, Chiapas and Campeche.
343. *D. sanguinalis* (L.) Scop.  
Pantropical, native ?  
Scattered localities in northern Mexico south to Queretaro.
344. *D. similis* Beetle  
Native, Mexico and West Indies.  
Reported from Tamaulipas.
345. *D. ternata* (Rich.) Stapf
346. *D. violascens* Link  
Pantropical, native?  
Weedy: Chiapas.

## DISSANTHELIUM Trin.

## Aveneae

347. *D. californicum* (Nutt.) Benth.  
Islands off the coast of California and Baja California, native.  
Dry slopes: Baja California acc. to Hitchcock.
348. *D. mathewsii* (Ball) Foster & Smith  
Bicentric: Mexico and Chile, native.  
Dry slopes: Mexico and San Luis Potosi.

## DISTICHLIS Raf.

## Eragrosteae

- 6 species in the Americas.
349. *D. palmeri* (Vasey) Fassett  
Coastal Salt Marshes, native, endemic.  
Baja California Norte and Sonora.
350. *D. spicata* (L.) Greene var. spicata  
Coastal, Canada and U.S. to Central America, native.  
Salt marshes: Tamaulipas, Veracruz, Tabasco, Yucatan, Quintana Roo and Chiapas and Oaxaca.
351. *D. spicata* var. divaricata Beetle  
California and Mexico, native.  
Western salt deserts: Coahuila, San Luis Potosi and Jalisco west to Baja California.
352. *D. spicata* var. mexicana Beetle  
Mexico, endemic.  
Central plains: alkaline soils, Durango and Coahuila south to Puebla.
353. *D. spicata* var. stolonifera Beetle  
California and Mexico, native.  
West coast salt flats: Baja Norte and Sonora and Jalisco.
354. *D. spicata* var. stricta (Torr.) Beetle.  
U.S. and Mexico.  
Interior salt flats: northern border states south to Puebla.

ECHINOCHLOA Beauv. Paniceae

20 species, subtropics and temperate, worldwide.

355. E. colonum (L.) Link  
Pantropical, introduced?  
Moist places: common throughout Mexico
- 355a. E. colonum f. vivipara Beetle
356. E. crusgalli (L.) Beauv.  
Europe, U.S., Mexico. Introduced?  
Weedy: occasional throughout Mexico.
357. E. crusgalli (HBK) Schult.  
Subtropics of the world, introduced?  
Wet places: occasional throughout Mexico.
358. E. holciformis (HBK) Chase  
Mexico and Guatemala, native.  
Wet places: Coahuila & Durango south to Mexico.
- 358a. E. jaliscana McVaugh  
endemic to central Mexico.
359. E. muricata (Beauv.) Fern.  
U.S. and northern Mexico, native.  
Wet places: Sonora and Chihuahua.
360. E. oplismenoides (Fourn.) Hitchc.  
Mexico, endemic.  
Wet places: Chihuahua, Durango, Zacatecas and Mexico.
361. E. polystachya (HBK) Hitchc.  
Wet places: Sonora and Chihuahua, south to Campeche.
362. E. pyramidalis (Lam.) Hitchc. and Chase  
Introduced.  
Wet places: Campeche.
363. E. walteri (Pursh) Heller  
U.S., Cuba, Mexico and Guatemala, native.  
Wet places: Chihuahua, Coahuila, San Luis Potosi, Tabasco, Campeche.

## ECHINOLAENA Desv.

364. E. gracilis Swallen  
Reported for Tabasco.

ELEUSINE Gaertn. Chlorideae

Species about six, South America and Old World.

365. E. indica (L.) Gaertn. var. indica  
Introduced.  
Weedy: common throughout Mexico.
366. E. indica var. brachystachya Trin.  
(including the cultivated E. corocana (L.) Gaertn.)  
Introduced.  
Weedy: Chihuahua, Jalisco, Michoacan, Mexico, Morelos and Yucatan.
367. E. multiflora Hochst. ex A. Rich.  
Introduced.  
Weedy: Scattered localities Chihuahua south to Chiapas.

ELYMUS L. Hordeae

75 species in temperate parts of the northern hemisphere.

368. E. canadensis L. var. canadensis  
United States and northern Mexico, native.  
Dry banks: Chihuahua, Coahuila and Nuevo Leon.



369. E. canadensis var. interruptus (Buhl.) Church  
E.U.A. and northern Mexico, native.  
Dry banks : Nuevo Leon, San Luis Potosi, Queretaro.
370. E. condensatus Presl  
California and Baja California, native.  
Coastal bluffs: Baja Norte.
371. E. glaucus Buckl.  
Western N. America from Alaska to Baja California.  
Open woods and meadows; reported for Baja Calif. Norte.
372. E. pringlei Scribn. & Merr.  
Mexico, endemic.  
Dry banks: Coahuila, Nuevo Leon, San Luis Potosi, Queretaro, Hidalgo, Mexico, Puebla and Veracruz.
373. E. triticoides Buckl.  
Washington and Montana south to Baja California, Arizona and Texas, native.  
Coastal bluffs: Baja California Norte and Tamaulipas.
- ELYONURUS Humb. & Bonpl. Andropogoneae  
Species about 15, subtropical and tropical, worldwide.
374. E. muticus (Spr.) Ktze. var. parviflorus (Scribn.) Beetle  
U.S. and northern Mexico, native.  
Grasslands: Sonora, Chihuahua and Durango, Nayarit, Guanajuato, Queretaro.
375. E. tripsacoides Humb. & Bonpl. var. tripsacoides  
Mexico to Brazil, native.  
Grasslands: Sinaloa, Michoacan and Veracruz.
376. E. tripsacoides var. sericeus Hack.  
Mexico, endemic.  
Rare: Veracruz common, Chihuahua south to Chiapas.
- ENNEAPOGON Desv. Eragrosteae  
35 species in the Old World, one in the Americas.
377. E. desvauxii Beauv.  
U.S. south to Peru and Argentina, native.  
Grasslands: northern border states south to Oaxaca.
- ERAGROSTIS Host. Eragrosteae  
200 species, temperate and tropical, worldwide.
378. E. acutiflora (HBK) Nees  
Mexico to Brazil, native.  
Pine savanna: Western slope.
379. E. atrovirens (Desf.) Steud.  
Introduced.  
Tabasco & Chiapas.
380. E. bahiensis Schrad.  
Mexico, Guatemala, Brazil, native.  
Wet places: Chiapas and Tabasco.
381. E. barrelieri Dav.  
Introduced.  
Scattered localities throughout Mexico.
382. E. capillaris (L.) Nees.  
Eastern United States and northern Mexico.  
Open woods, reported from tamaulipas.
383. E. chloromelas Steud.  
Introduced.  
Grown experimentally in Coahuila.

384. E. cilianensis (All.) Link  
Introduced.  
Scattered localities throughout Mexico.
385. E. ciliaris (L.) R.Br. var. ciliaris  
Pantropical, introduced.  
Weedy: common throughout Mexico.
386. E. ciliaris var. laxa Kuntze  
West Indies and Mexico, native.  
Reported for Yucatan and Baja California.
387. E. contrerasii Pohl  
Planicies lodosas, Mexico and Guatemala.  
Reported from Campeche.
388. E. curtipedicellata Buckl.  
U.S. to northern Mexico, native.  
Sandy soil: Coahuila and Nuevo Leon.
389. E. curvula (Schrad.) Nees  
Introduced.  
Cultivated: Scattered location, Chihuahua, Coahuila, Nuevo Leon, south to Mexico.
390. E. ellioitti S. wats.  
U.S., West Indies, Mexico and Honduras, native.  
Pine savanna: Tamaulipas, Michoacan, Veracruz, Oaxaca, Chiapas and Quintana Roo.
391. E. erosa Scribn.  
U.S. and northern Mexico, native.  
Dry slopes: Sonora, Chihuahua, Coahuila and Nuevo Leon.
392. E. excelsa Griseb.  
West Indies and Mexico, native.  
Dunes, Tamaulipas, Veracruz and Quintana Roo.
393. E. glandulosa Harvey  
Mexico and Guatemala, native.  
Weedy: Jalisco, Guerrero and Morelos.
394. E. glomerata (Walt.) L.H. Dewey  
U.S., Mexico south to Argentina, native.  
Wet sandy soil: Colima, Guerrero and Morelos.
395. E. guatemalensis Witherspoon  
Mexico and Guatemala, native.  
Oak-pine forest, Mexico and Puebla.
396. E. hirsuta (Michx.) Nees  
Southeastern U.S., Mexico to Central America, native.  
Pine savanna, Oaxaca, Chiapas and Tabasco.
397. E. hirta Fourn. var. hirta  
Mexico and Central America, native.  
Rocky slopes: Chiapas.
398. E. hirta var. longiramea (Swallen) Witherspoon  
Mexico, endemic.  
Mountains, Tamaulipas, Nuevo Leon and San Luis Potosi.
399. E. hypnoides (Lam.) B.S.P.  
U.S. and West Indies, south to Argentina, native.  
Wet, sandy soil: Baja California Sur, Sonora, Tamaulipas and San Luis Potosi, Guanajuato, Guerrero, Oaxaca, Chiapas, Veracruz, Tabasco.
400. E. intermedia Hitchc. var. intermedia  
U.S., Mexico and Guatemala, native.  
Rocky slopes: common throughout Mexico.
401. E. intermedia var. appressa Witherspoon  
Mexico, endemic.  
Juniper oak forest, border Zacatecas-Jalisco.

- 402.. E. intermedia var. oreophila (Harvey) Witherspoon  
Mexico, endemic.  
Rocky slopes: Baja California Sur, Coahuila, Nuevo Leon, Michoacan, and Hidalgo (Type loc.)
- 403.. E. intermedia var. praetermissa (Harvey) Witherspoon  
Mexico and Central America.  
Pine oak forests, Tamaulipas, San Luis Potosi, Jalisco, and Mexico.
404. E. lehmanniana Nees  
Introduced.  
Cultivated: Sonora, Chihuahua, Coahuila.
405. E. lugens Nees  
United States and Mexico south to Argentina, native.  
Dry slopes: northern border states south to Chiapas.
406. E. maypurensis (HBK) Steud.  
Mexico to Bolivia and Brazil, native.  
Weedy: Sinaloa and Durango south to Chiapas.
407. E. mexicana (Hornem.) Link var. mexicana  
U.S. and Mexico south to Brazil, native.  
Pine savanna: northern border states south to Chiapas.
408. E. mexicana var. pygmaea Doell.  
Same distribution as the species.  
Reported from scattered localities throughout Mexico.
409. E. obtusiflora (Fourn.) Scribn.  
Mexico, endemic.  
Salt flats: Chihuahua, Coahuila, Nuevo Leon, Mexico and Veracruz.
410. E. orcuttiana Vasey  
U.S. and northern Mexico, native.  
Weedy: Baja California Sur, & Baja California Norte.
411. E. palmeri Wats.  
Texas and northern Mexico, native.  
Open slopes: northern border states except for Baja California Norte, Durango, Zacatecas, Oaxaca.
412. E. pectinacea (Michx.) Nees  
United States and Mexico, native.  
Weedy: Coahuila and Zacatecas.
413. E. pilosa (L.) Beauv.  
Introduced.  
Weedy: common, northern border states south to Chiapas.
414. E. plumbea Scribn.  
Mexico, endemic.  
Dry slopes: Jalisco (Type loc.) Colima, Michoacan, San Luis Potosi, Puebla, Veracruz, Guanajuato.
415. E. pringlei Mattei  
Mexico, endemic.  
Weedy: Chihuahua, Durango, Jalisco and Michoacan.
416. E. prolifera (Sw.) Steud.  
West Indies, southern Mexico and Central America to Brazil, native.  
Weedy: Michoacan, Veracruz and Quintana Roo.
417. E. reptans (Michx.) Nees  
U.S. south to northern Mexico, native.  
Wet, sandy soil: Baja California Norte and Coahuila.

418. E. secundiflora Presl var. secundiflora  
Brazil and Mexico, native.  
Peninsula Reported from Guerrero and Oaxaca.
419. E. secundiflora Presl var. capitata (Fourn.) Beetle  
Florida to Texas and Mexico, native.  
Reported for Veracruz and Tamaulipas.
420. E. sessilispica Buckl.  
U.S. and northern Mexico, native.  
Sandy prairies: Chihuahua and Tamaulipas.
421. E. silveana Swallen  
Texas and Mexico, native.  
Sandy soil: Coahuila, Tamaulipas and San Luis Potosi.
422. E. simpliciflora (Presl) Steud.  
Southern Mexico to Panama, native.  
Weedy: "southern Mexico" acc. to Swallen: Grasses of Guatemala.
423. E. spectabilis (pursh) Steud.  
U.S., Mexico and British Honduras, native.  
Weedy: "northeastern Mexico" acc. to Harvey.
424. E. spicata Vasey  
Texas and Mexico, native.  
Coastal: Tamaulipas and Baja California Sur.
425. E. superba Peyr.  
Introduced.  
Cultivated: Sonora, Chihuahua, Coahuila, Nuevo Leon, & Michoacan.
426. E. swalleni Hitchc.  
Texas and Mexico, native.  
Sandy soil: San Luis Potosi, Jalisco, Veracruz and Chiapas.
427. E. tenella (L.) Beauv.  
Pantropical, introduced?  
Weedy: Baja California Sur, Nayarit, Jalisco, Guerrero, Puebla, Veracruz, Oaxaca, Tabasco, Yucatan and Quintana Roo.
428. E. tenuifolia (A. Rich.) Hochst.  
Introduced from Africa. Weedy.  
Reported from Oaxaca.
429. E. tephrosanthos Schult.  
U.S., West Indies, south to Brazil, Native.  
Weedy: common throughout Mexico.
- 430a. E. trichocolea Hack. and Arech. var. floridana (Hitch.) Witherspoon.  
U.S. and Mexico to Uruguay.  
Sandy soil: Puebla, Oaxaca and Chiapas.
- 430b. E. viscosa (Retz.) Trin.  
Introduced.  
Sandy soil: Baja California Norte, Baja California Sur, Sinaloa, Durango, Guerrero and Chiapas.
- 430c. E. yucatan Harvey  
Mexico, endemic.  
Sandy soil: Yucatan.
- EREMOCHLOA Buese  
10 species in subtropical Asia.
- 430d. E. ophiuroides (Munro) Hack.  
Introduced, cultivated as a lawn grass.

## ERIANTHUS Michx.

Andropogoneae

Twenty-five species, temperate &amp; subtropical, worldwide

430e. E. giganteus (Walt.) Muhl.

U.S., Cuba and Mexico, native.

Swamps: Mexico, Hidalgo and Veracruz.

430f. E. trinii Hack.

Mexico and South America, native.

Swamps: Nuevo Leon, San Luis Potosi, Queretaro, Hidalgo, Veracruz and Chiapas.

## ERIOCHLOA HBK

Paniceae

Twenty-five species, subtropical, worldwide.

430g. E. aristata Vasey

Mexico and Guatemala, native.

Wet places: common from Sonora and Chihuahua south to Chiapas.

430h. E. boxiana Hitchc.

West Indies and Mexico, native.

Swamps: Yucatan.

430i. E. constricta Hitchc.

U.S. A. &amp; northern Mexico acc. Gould.

430j. E. lemmoni Vasey and Scribn. var. lemmoni

U.S. and northern Mexico, native.

Weedy: Sonora, Chihuahua, Coahuila, Sinaloa, Jalisco, Colima, and Mexico.

430k. E. lemmoni var. minor (Vasey) Beetle

Same distribution as the species, native.

Weedy: northern border states south to Oaxaca.

430l. E. nelsoni Scribn. & Smith.

Mexico, Guatemala and Nicaragua, native.

Open slopes: Sonora, and Chihuahua south to along the west slope. Oaxaca (Type loc.)

430m. E. punctata (L.) Desv.

U.S., West Indies, Mexico south to Argentina, native.

Open slopes: Chihuahua, Coahuila and Nuevo Leon, south to Chiapas and Tabasco.

430n. E. sericea (Scheele) Munro

U.S. and northern Mexico, native.

Grassland: Coahuila.

## ERIOCHRYSIS Beauv.

Andropogoneae

Nine species, 4 in America, four in Africa, one in India.

430o. E. cayennensis Beauv.

Southern Mexico south to northern Argentina and Brazil, native.

Swamps: Oaxaca, Veracruz, Chiapas, Tabasco.

## ERIONEURON Nash

Eragrosteae

5 species, southwest U.S. and Mexico.

430p. E. avenaceum (HBK) Tateoka var. avenaceum

U.S. and Mexico, native.

Dry slopes: Coahuila and Nuevo Leon south to Oaxaca.

430q. E. avenaceum var. longiaristatum (Kurtz) Beetle

U.S. and Mexico, native.

Chihuahua, Coahuila and Nuevo Leon, Durango, Zacatecas and San Luis Potosi, Guanajuato, Queretaro, Guerrero.

430r. E. avenaceum (HBK) Tateoka var. nealleyi (Vasey) Gould.

U.S. and Mexico, native.

Open range: Chihuahua, Coahuila, Nuevo Leon, Tamaulipas, Durango, Zacatecas and Queretaro, Aguascalientes, San Luis Potosi and Hidalgo.

430s. E. pilosum (Buckl.) Nash

U.S. and Mexico, native.

Open range: Coahuila, Nuevo Leon, Tamaulipas, Zacatecas, Aguascalientes, San Luis Potosi, and Oaxaca.

430t E. pulchellum (HBK) Tateoka

U.S. and Mexico, native.

Open range: northern border states south to Mexico.

EUCHLAENA Schrad.

Andropogoneae

2 species in Mexico and Central America.

430u. E. mexicana Schrad.

Cultivated, endemic? (native of the Americas).

Cultivated: northern border states south to Chiapas.

431. Euclasta condylotricha (Hochst.) Stanf

Mexico and West Indies to Colombia, Venezuela and northern Brazil, native.

Subtropical clearings: Sinaloa, Jalisco, Colima, Michoacan, Veracruz, and Oaxaca.

EUSTACHYS Desv.

Chlorideae

12 species, tronics and subtronics, worldwide.

432. E. petraea (Sw.) Desf.

U. S., West Indies, Mexico and Central America, native.

East coast, Nuevo Leon, Tamaulipas, Veracruz, Tabasco and the Yucatan Peninsula.

## FESTUCA L.

## Festuceae

About 150 species, temperate, worldwide.

433. *F. amplissima* Rupr.  
Mexico and Central America, native.  
Baja California Norte & Sonora south also, the west coast to Jalisco; also high mountains of the central plateau, Michoacan, Hidalgo, Mexico, Morelos, Guerrero, Puebla, Oaxaca and Chiapas.
434. *F. arundinacea* Schreb.  
Introduced.  
Cultivated: northern states south to Puebla.
435. *F. brevigloria* Swallen  
Mexico and Central America, native.  
High forests: Jalisco and Guanajuato south to Chiapas.
436. *Festuca fratercula* Rupr.  
U. S. and northern Mexico, native.  
Pine savanna, Nuevo Leon, Chihuahua, Sonora, Durango & Guanajuato also Veracruz (Orizaba).
437. *F. henhaestophila* Nees  
Mexico, endemic.  
Central mountains: Nuevo Leon (Cerro Potosi), Puebla, and Veracruz (Orizaba).
438. *F. ligulata* Swallen  
Texas and northern Mexico.  
Mountain slopes: Coahuila.
439. *F. mirabilis* Piper  
Mexico, endemic.  
Mountain slopes: Chihuahua; also San Luis Potosi (type loc.), Hidalgo and Mexico.
440. *F. ovina* L. var. *brachyphylla* (Schult.) Piper  
Circumboreal and south in the high mountains, native.  
Mountain slopes: Chihuahua, Durango, Nuevo Leon, Tamaulipas, Mexico and Puebla.
- 440a. *Festuca ovina* L. var. *glauca* Fries  
Introduce, Cultivated as ornamental.
441. *F. rosei* Piper  
Mexico, endemic.  
Central mountains: Michoacan and Mexico.
442. *F. rubra* L.  
Circumboreal and south in the high mountains, native.  
Mountain slopes: Chihuahua and Mexico.

443. F. tolucensis HBK  
Mexico and Central America, native.  
Pine savanna: Chihuahua south to Chianas.
444. F. wildenoviana Schult.  
Mexico, endemic.  
Central mountains: Guerrero, Mexico and Puebla.
- GASTRIDIDIUM Beauv. Agrostideae  
4 or 5 species, Mediterranean.
445. Gastridium ventricosum (Gouan) Schinz & Thell.  
Introduced.  
Dry hills: Baja California Norte.
- GLYCERIA R. Br. Festuceae  
35 species, temperate, worldwide.
446. Glyceria borealis (Nash) Batchelder  
Native, Alaska, Canada, United States and northern Mexico.  
Reported from Chihuahua.
447. G. fluitans (L.) P. Br.  
Circumboreal and south in the high mountains, native.  
Central mountains: San Luis Potosi, Guanajuato,  
Querétaro, Hidalgo and Mexico.
448. Glyceria mexicana (Kelso) Beetle  
Mexico and Guatemala, native.  
Wet places: Hidalgo, Mexico, Morelos Oaxaca and Chiapas.
449. G. septentrionalis Hitchc.  
Canada south to Mexico, native.  
Wet places: reported by Hernandez-X for San Luis Potosi.
450. G. striata (Lam.) Hitchc.  
Canada south to Mexico, native.  
Wet places: Sonora and Chihuahua.
- GOUINIA Fourn. Chlorideae  
13 species, subtropical, in the Americas.
451. G. guatemalensis (Hack.) Swallen  
Mexico and Central America, native.  
Brush: Chianas, Campeche and Yucatan.
452. G. longiramea Swallen  
Mexico, endemic.  
Brush: Yucatan and Quintana Roo.
453. G. mexicana (Scribn.) Vasey  
Mexico, endemic.  
Brush: San Luis Potosi.
454. G. papillosa Swallen  
Mexico, endemic.  
Brush: Yucatan and Quintana Roo.
455. G. ramosa Swallen  
Mexico, endemic.  
Brush: Oaxaca, Campeche, Yucatan and Quintana Roo.
456. G. virgata (Presl) Scribn.  
Mexico south to Peru, Bolivia and Brazil, native.  
Brush: Sonora and Nuevo Leon south to Chiapas, Campeche  
and Yucatan.
457. Griffithsochloa multifida (Griffiths) Pierce  
Mexico, endemic.  
Dry slopes: Mexico, Morelos, Guerrero and Oaxaca.



- GYMNOPOGON Beauv. Chlorideae  
15 species, subtrropical, Americas.
458. *G. spicatus* (Spreng.) Kuntze  
Mexico and West Indies south to Argentina, native.  
Pine savanna: Veracruz and Chiapas.
- GYNERIUM Willd. Arundineae  
Monotypic.
459. *G. sagittatum* (Aubl.) Beauv.  
Southern Mexico to Paraguay, native.  
Thickets: Oaxaca, Veracruz, Chianas and Tabasco.
- HACKELOCHLOA Kuntze Paniceae  
Monotypic.
460. *H. granularis* (L.) Kuntze  
Pantrropical, native.  
Weedy: occasional throughout Mexico.
461. *Helleria livida* (HBK) Pourn.  
Mexico, endemic.  
Central mountains: Mexico, Puebla and Veracruz.
- HEMARTHRIA R. Br. Andropogoneae  
12 species, Old World, tropics and subtropics.
462. *H.*  
Introduced.  
Open slopes: Coahuila, Nuevo Leon, San Luis Potosi,  
Mexico, south to Chiapas and Tabasco.
- HETEROPOGON Pers. Andropogoneae  
8 species, subtropics, worldwide.
463. *H. contortus* (L.) Beauv.  
U. S., West Indies, and Mexico south to Argentina  
(native?), also in the Old World.  
Weedy: common throughout Mexico.
464. *H. melanocarpus* (Ell.) Benth.  
Pantrropical, native?  
Weedy: northern border states south to Chiapas.
- HISPOCHLOE R. Br.  
Species 15-20, temperate, worldwide.
465. *H. mexicana* (Pursh.) Benth.  
Mexico and Guatemala, native.  
Pine savanna: Oaxaca (type loc.) Morelos and Chiapas.
- HILARIA HBK Chlorideae  
Six species, in the Americas.
466. *H. belangeri* (Steud.) Nash var. *belangeri*  
U. S. south to central Mexico, native.  
Grassland: northern border states south to Oaxaca.
- 466a. *H. belangeri* var. *longifolia* (Vasey) Hitchc.  
Reported in both U. S. and Mexico.  
Rocky hills, Sonora (type loc.), Coahuila.

467. H. cenchroides HBK  
Mexico and Guatemala, native.  
Open slopes: common from northern border states south to Chiapas.
468. H. ciliata (Scribn.) Nash  
Mexico, endemic.  
Open slopes: Sonora, Baja California Sur, Mayarit, Tamaulipas, San Luis Potosi, Jalisco (type loc.), south to Oaxaca.
469. H. hintoni Sohns  
Mexico, endemic.  
Queretaro, Mexico and Guerrero.
470. H. mutica (Buckl.) Benth.  
U. S. and northern Mexico, native.  
Dry flats: Sonora, Chihuahua, Coahuila, Nuevo Leon, Durango and Zacatecas.
471. H. rigida (Thurb.) Benth.  
U. S. and northern Mexico, native.  
Desert: Baja California Norte, Sonora and Chihuahua.
472. H. semplei Sohns  
Mexico, endemic.  
Llanos, Michoacan (type loc.).
473. H. swallenii Cory  
Texas and northern Mexico, native.  
Grasslands: Chihuahua, Coahuila, Nuevo Leon, Durango, Zacatecas and San Luis Potosi.

## HOLCUS L.

## Aveneae

About 8 species, Old World, temperate.

474. H. lanatus L.  
Introduced.  
Weedy: Chihuahua, Puebla, Veracruz and Chiapas.

## HOMOLEPIA Chase

## Paniceae

Three species in tropical America.

475. H. aturensis (HBK) Chase  
Southern Mexico to Bolivia and Brazil, native.  
Marshes: Oaxaca, Chiapas, Veracruz and Tabasco.

## HORDEUM L.

## Hordeae

Twenty-five species, temperate, worldwide.

476. Hordeum adscendens HBK  
Apparently native? weedy.  
Coahuila, San Luis Potosi, Mexico, Aguascalientes and Puebla.
477. Hordeum arizonicum Covas  
Native, Arizona, southern California and Mexico.  
Reported by Wiggins for Baja California Norte.
478. Hordeum brachyantherum Nevski  
Temperate North America, native.  
Reported by Gould for Baja California Norte.
479. Hordeum depressum (Scribn. & Smith) Rydb.  
Native, Western North America. Reported by Wiggins: "Moist alkaline depressions and flats" Baja California Norte.

480. H. glaucum Steud.  
Introduced.  
Mediterranean: Baja California Norte.
481. Hordeum hystrix L.  
Introduced, widespread in North America.  
Reported by Gould and Moran for Baja California Norte.
482. Hordeum jubatum L.  
Introduced: reported by  
Gould for Baja California Norte.
483. H. pusillum var. pubens Hitchc.  
U. S. and Northern Mexico, native.  
Weedy: Coahuila.
484. H. vulgare L.  
Introduced.  
Cultivated: scattered localities in Central and  
northern Mexico.
485. Hydrochloa caroliniensis Beauv. var. caroliniensis.  
Aquatic, native.  
Jalisco, etc.
- 485a. Hydrochloa caroliniensis var. conneri Guzmán  
Native, aquatic, described from & endemic to Jalisco.

## HYMENACHNE Beauv.

Paniceae

10 species, tropics, worldwide.

486. H. amplexicaulis (Rudge) Nees  
Mexico and West Indies south to Argentina, native.  
Marshes: West from Sinaloa to Chiapas, also Veracruz,  
Tabasco and Campeche.

## HYPARRHENIA

Andropogoneae

Seventy species, tropical and subtropical Africa, one  
in Americas.

487. H. bracteata (H. & B.) Stapf  
Mexico to Brazil and Paraguay, native.  
Marshes: Veracruz, Chiapas, and Oaxaca.
488. H. hirta (Nees) Stapf  
Introduced.  
Cultivated: Nuevo Leon, San Luis Potosi, Oaxaca,  
Chiapas and Yucatan.
489. H. rufa (Nees) Stapf  
Introduced.  
Cultivated and escaped: Sinaloa south to the Yucatan  
Peninsula.
490. Hyparrhelia dissoluta (Nees ex Steud.) Clayton  
Introduced from Africa.  
Rocky slopes, Sinaloa, Nayarit, Jalisco, Michoacan,  
Mexico, Chiapas and Yucatan.
491. Hypogynium virgatum (Desv.) Dandy  
West Indies, Mexico, Central America south to Argentina.  
Reported from Oaxaca, Tabasco

## ICHNANTHUS Beauv.

Paniceae

About 50 species in the New World tropics, 2 in the 01  
World tropics.

492. I. calvescens (Nees) Doell.  
Mexico and British Honduras, native.  
Oak forest: Oaxaca.

493. I. lanceolatus Scribn. & Sm.  
Mexico and British Honduras, native.  
Brush: Yucatan Peninsula, Chiapas, Tabasco, and the Yucatan Peninsula.
494. I. nemorosus (Sw.) Doell.  
West Indies and Mexico south to Panama, native.  
Brush: San Luis Potosi, Hidalgo, Veracruz, Oaxaca and Chiapas.
495. I. pallens (Sw.) Munro  
Mexico and West Indies south to tropical S. America.  
Brush: San Luis Potosi, Puebla, Veracruz, Oaxaca, Chiapas, Tabasco and Quintana Roo.
- 495a. I. pallens f. monstrosum (Fourn.) Beetle
496. I. standleyi Hitchc.  
Mexico and Central America, native.  
Forest margin: Chiapas.
497. I. tenuis (Presl) Hitchc. and Chase  
Mexico, Central America, south to Brazil, native.  
Brush: Chiapas, Veracruz.

## IMPERATA Cyrill

## Andropogoneae

Ten species, subtropical, worldwide.

498. I. brasiliensis Trin.  
Florida, Mexico, and south to Argentina, native.  
Brush: Oaxaca, Veracruz, Tabasco, Chiapas, and Campeche.
499. I. brevifolia Vasey  
Texas to California and Mexico, native.  
Brush: Baja California Norte, Sonora, Chihuahua, Nayarit and Jalisco.
500. I. contracta (HBK) Hitchc.  
Mexico and West Indies south to Brazil, native.  
Grassland: Hidalgo, Veracruz, Tabasco, Chiapas and Campeche.
501. I. cylindrica (L.) Beauv.  
Introduced.  
Cultivated or escaped: Chiapas, reported by Gould.

## ISACHNE R. Br.

## Paniceae

Twenty-five species, tropics, worldwide.

502. I. arundinacea (Sw.) Griseb.  
Mexico, Central America to Peru, native.  
Pine savanna: Puebla, Veracruz, Oaxaca, Chiapas.
503. I. pubescens Swallen  
Mexico and Guatemala, native.  
Pine savanna, Veracruz and Chiapas.

## ISCHAEMUM L.

## Paniceae

Fifty species, tropics, worldwide.

504. I. latifolium (Spreng) Kunth  
Mexico and West Indies south to Brazil, native.  
Weedy: Veracruz, Oaxaca, Chiapas and Campeche
505. Ischaemum rugosum Salisb.  
Introduced from Asia.  
Reported from Nayarit and Guerrero.

## IXOPHORUS Schlecht.

## Panicum

506. Ixophorus palmeri (Vasey) Beetle  
Native, endemic.  
Reported from Jalisco and Colima.
507. I. unisetus (Presl) Schlecht.  
Mexico, Cuba and Central America, Colombia and Venezuela,  
native.  
Swamps: Sinaloa and Tamaulipas south to Chiapas.

## JOUVEA Fourn.

## Eragrosteae

- Two species, Mexico and Central America.
508. J. pilosa (Presl) Scribn.  
Mexico and Central America, native.  
Sand dunes: western coastal states: Tamaulipas, Tabasco,  
Campeche and Yucatan.
509. J. straminea Fourn.  
Mexico and Central America, native.  
Salt marshes: west coast from Sinaloa to Chiapas.

## KOELERIA Pers.

## Aveneae

- Fifty species, temperate, worldwide.
510. K. californica (Domin) Beetle  
Calif. and Mexico, Native.  
Dry slopes: northern border states at low
511. Koeleria cristata (L.) Pers. var. cristata  
Circumboreal, native.  
Central states at high elevations.
- 511a. Koeleria cristata var. geniculata (Fourn.) Beetle  
Mexico, endemic.  
Pine forests, central highlands.
512. Koeleria phleoides (Vill.) Pers.  
Introduced from the Mediterranean Region.  
Reported only for Baja California Norte.

## LAMARCKIA Moench.

- Monotypic.
513. L. aurea (L.) Moench.  
Introduced.  
Weedy: Baja California Norte.

## LASIACIS (Griseb.) Hitchc.

## Paniceae

- Thirty species in American tropics.
514. L. divaricata (L.) Hitchc. var. divaricata 513.  
Florida, West Indies, Mexico south to Argentina,  
native.  
Tropical forest margin: Baja California Sur, Sinaloa,  
Nuevo Leon, San Luis Potosi south to Yucatan Peninsula.
- 514a. Lasiacis divaricata var. leptostachya (Hitchc.) Davidse  
Mexico and Central America, native.  
Tropical forest margins, Oaxaca and Chiapas.
515. L. grisebachii (Nash) Hitchc.  
Mexico, Cuba and Central America, native.  
Tropical forest margin: Veracruz, Chiapas, Campeche  
and Quintana Roo, also San Luis Potosi, Guerrero,  
Oaxaca, Puebla.

516. Lasiacis linearis Swallen  
Mexico and Central America, native.  
Cloud forests or pine woods, Chiapas.
517. Lasiacis nigra Davidse  
Mexico to Peru, native.  
Montane, forest margin, common, Nayarit and  
Nuevo Leon south to Chiapas.
518. L. oaxacensis (Steud.) Hitchc.  
West Indies, Mexico, Central America, south to Peru, native.  
Brush: Michoacan, Oaxaca, Veracruz and Chiapas, also  
Nayarit and Jalisco.
519. L. procerrima (Hack.) Hitchc.  
Mexico to Peru and Brazil, native.  
Brush: Sinaloa, Durango, Nayarit south to Chiapas and Tabasco
520. L. rhizophora (Fourn.) Hitchc.  
Mexico and Central America, native.  
Thickets: Veracruz and Chiapas, also Oaxaca, Guerrero and  
Morelos.
521. L. rugelii (Griseb.) Hitchc.  
West Indies and Mexico, native.  
Thickets: Yucatan, Guanajuato and San Luis Potosi south  
to the Yucatan Peninsula.
522. L. ruscifolia (HBK) Hitchc.  
West Indies, Mexico south to Peru and Argentina, native.  
Brush: common throughout Mexico.
523. L. scabrior Hitchc.  
Mexico, Central America, Columbia and Ecuador, native.  
Brush: Veracruz, Oaxaca, and Chiapas.
524. L. sloanei (Griseb.) Hitchc.  
West Indies and Mexico, Central America, Colombia and  
Venezuela, Ecuador, native.  
Brush: Tamaulipas, San Luis Potosi south to Chiapas and  
the Yucatan Peninsula.
525. L. sorghoidea (Desv.) Hitchc. and Chase  
West Indies, Mexico, Central America south to Bolivia  
and Argentina, native.  
Brush: Mexico, Veracruz, Oaxaca and Chiapas.
526. Lasiacis standleyi Hitchc.  
Mexico to Venezuela and Ecuador.  
Shady woods, Chiapas.

## LEERSIA Sw.

## Oryzeae

- Ten species, worldwide, aquatic.
527. L. hexandra Sw.  
Pantropical, native.  
Aquatic: Durango, Jalisco, south to Chiapas and Tabasco.
528. L. ligularis Trin. var. ligularis  
Mexico, endemic.  
Aquatic: Puebla, Veracruz.
- 528a. Leersia ligularis Trin var. breviligularis (Prod.) Pyrah  
Mexico and Guatemala, native.  
Forests Nuevo Leon and Tamaulipas south to Chiapas and  
Yucatan.

529. L. monandra Sw.  
 U. S., West Indies and Mexico, native.  
 Aquatic: Nuevo Leon and Tamaulipas, San Luis Potosi, Tabasco and Yucatan.
530. L. oryzoides (L.) Sw.  
 Canada, U. S. and northern Mexico, native.  
 Aquatic: Nuevo Leon, Tamaulipas and San Luis Potosi.
- LEPTOCHLOA Beauv. Chlorideae  
 Seventy species, subtropical, worldwide.
531. L. aquatica Scribn.  
 Mexico, endemic.  
 Aquatic: Jalisco, Michoacan, Morelos (type loc.) and Guerrero.
532. Leptochloa digitatiformis Beetle  
 Mexico, native, endemic.  
 Reported from Sonora.
533. L. domingensis (Jacq.) trin.  
 Mexico, endemic.  
 Swales: Tamaulipas, San Luis Potosi, south to Yucatan Peninsula.
534. L. dubia (HBK) Nees  
 U. S., Mexico and Argentina, native.  
 Swales: northern border states, south to Chiapas.
535. L. fascicularis (Lam.) Gray  
 U. S. and Mexico, Central and south America, native.  
 Swales: common throughout Mexico.
536. L. filiformis (Lam.) Beauv.  
 U. S. south to Argentina, native.  
 Swales, weedy: common throughout Mexico.
- 536a. Leptochloa filiformis var. latifolia Beetle  
 536b. Leptochloa filiformis (Lam.) Beauv. var. pulchella (Scribn.) Beetle  
 Mexico, native, endemic, mostly Coastal.
537. L. nealleyi Vasey  
 U. S. and Mexico, native.  
 Swales: Tamaulipas, Veracruz and Yucatan; Sinaloa, Nayarit and Jalisco.
538. L. panicoides (Presl) Hitchc.  
 U. S., Mexico and Brazil, native.  
 Swales: Sonora, Sinaloa, Nayarit, Colima, Guerrero, Morelos, Oaxaca and Tabasco.
539. L. scabra Nees  
 U. S., Mexico, West Indies, south to Brazil, native.  
 Swales: Sonora, Sinaloa, Michoacan, Veracruz, Chiapas and Tabasco.
540. L. uninervia (Presl) Hitchc. and Chase  
 U.S., Mexico, West Indies, south to Argentina, native.  
 Swales: northern border states north to Chiapas.
541. L. virgata (L.) Beauv.  
 U. S., Mexico, West Indies, south to Argentina, native.  
 Swales: south to Nayarit, San Luis Potosi and Tamaulipas. Yucatan Peninsula.

542. L. viscida (Scribn.) Beal  
U. S. and northern Mexico, native.  
Weedy: Baja California Norte, Baja California Sur, Sonora,  
Sinaloa and Chihuahua.

LEPTOCORYPHIUM Nees Paniceae

One or two species in tropical America.

543. L. lanatum (HBK) Nees  
West Indies, Mexico, Central America to Argentina, native.  
Pine savanna: Chiapas, Veracruz and Tabasco.

LEPTOLOMA Chase Paniceae

Four species, one North America, three in Australia.

544. L. cognatum (Schultes) Chase  
Canada, U. S. and northern Mexico, native.  
Sandy soil: Chihuahua, Coahuila, Nuevo Leon, Tamaulipas,  
Durango, Zacatecas, San Luis Potosi, Guanajuato, Hidalgo  
and Veracruz.

LIMNODEA Dewey Agrostideae

Monotypic.

545. L. arkansana (Nutt.) Dewey  
U.S. and northern Mexico, native.  
Grassland: Coahuila.

LITHACHNE Beauv. Olyreae

Four species, tropical America.

546. L. pauciflora (Sw.) Beauv.  
West Indies and Mexico south to Argentina, native.  
Tropical forest: Tamaulipas, San Luis Potosi, Veracruz  
and Chiapas.

LOLIUM L. Festuceae

Fifteen species, temperate, Old World.

547. L. multiflorum Lam.  
Introduced.  
Weedy: scattered localities throughout Mexico.
548. L. perenne L.  
Introduced.  
Cultivated and escaped: scattered localities throughout  
Mexico.
549. Lolium temulentum L.  
Introduced from the Mediterranean region.  
Weedy, Baja California Norte, San Luis Potosi,  
Puebla, Veracruz and Oaxaca.



## LUZIOLO Juss.

## Zizanieae

Eight species in tropical America.

550. L. gracillima Prod.  
Weedy in wet places, Sonora and Jalisco.
551. L. peruviana Gmel.  
Mexico, Cuba, south to Argentina, native.  
Marshes: Queretaro, Mexico, Veracruz, Chiapas  
and Tabasco.

## LYCURUS HBK

## Eragrosteae

Six species, temperate and subtropical America.

552. L. phleoides HBK var. phleoides  
U. S. and Mexico, native.  
Grassland: northern border states south to Chiapas.
- 552a. Lycurus phleoides var. brevifolius Scribn.  
U.S.A., Mexico and South America.  
Grasslands, common throughout Mexico except for the  
Yucatan Peninsula.
- 552b. L. phleoides var. glaucifolius Beal  
U. S. and Mexico, native.  
Grassland: Sonora and Chihuahua.

## MELICA L.

## Meliceae

Sixty species, temperate, worldwide.

553. M. frutescens Scribn.  
California and Baja California, native.  
Brush: Baja California Norte and Baja California Sur.
554. M. imperfecta Trin. var. imperfecta.  
California and Baja California, native.  
Brush: Baja California Norte and Baja California Sur.
- 554a. M. imperfecta var. flexuosa Beal.
- 554b. M. imperfecta var. minor Scribn.
- 554c. M. imperfecta var. refracta Thurb.
555. M. montezumae Piper  
(including M. alba Hitchc.)  
Texas and northern Mexico, native  
Rocky slopes: Chihuahua, Coahuila and Nuevo Leon.
556. M. nitens (Scribn.) Nutt.  
U. S. and northern Mexico, native.  
Woods and grasslands: Coahuila and Nuevo Leon.
557. M. porteri Scribn.  
U. S. and northern Mexico, native.  
Grassland: Chihuahua.

## MELINIS Beauv.

## Melinideae

Fifteen species in Africa.

558. M. minutiflora Beauv.  
Introduced.  
Roadsides: Jalisco, Michoacan, Mexico, Hidalgo, Puebla,  
Veracruz, Oaxaca, Chiapas and Tabasco.

## MESOSETUM Steud.

## Paniceae

Thirty species, American tropics, mostly Brazil.

559. M. blakei Swallen  
Mexico, endemic and Guatemala.  
Tropical forest margin: Tabasco, Oaxaca and Chiapas.

560. M. pittieri Hitchc.  
Mexico and Central America, native.  
Pine savanna: Oaxaca and Chiapas.

## METCALFIA Conert

## Festuceae

Monotypic.

561. M. mexicana (Scribn.) Conert  
Mexico, endemic.  
Pine savanna: Coahuila, Nuevo Leon, San Luis Potosi,  
Queretaro, Hidalgo, Mexico, Puebla, Oaxaca and Chiapas.

## MICROCHLOA R. Br.

## Chlorideae

Five or 6 species, tropics, worldwide.

562. M. kunthii Desv.  
Mexico, Central America and S. America, native.  
Rocky ground: Baja California Chihuahua south to  
Chiapas.
563. Miscanthus sinensis Anderson  
Introduced from China and Japan.  
Cultivated as an ornamental; Veracruz.
- 563a. Miscanthus sinensis L. zebrina (Beal) Beetle

## MONANTHOCHLOE Engelm.

## Aeluropodeae

Three species in the Americas.

564. M. littoralis Engelm.  
U. S., Cuba and Mexico, native.  
Baja California Norte, Baja California Sur, Sonora,  
Sinaloa, Coahuila, Tamaulipas, Chiapas and Yucatan.
- 564a. Monerma cylindrica (Willd.) Coss & Dur.  
Introduced from Europe. Reported from Baja California  
Norte.

## MUHLENBERGIA Schreb.

## Eragrosteae

One hundred sixty species, centered in Mexico, but  
worldwide.

565. M. alamosae Vasey  
Mexico, endemic.  
Open slopes: Baja California Sur, Sonora, Chihuahua,  
Sinaloa, Durango, Jalisco, Guanajuato, Mexico, and  
Morelos.
567. M. angustifolia Swallen  
Mexico, endemic.  
Open slopes: Jalisco.
568. M. annua (Vasey) Swallen  
Mexico, endemic.  
Open slopes, Chihuahua.
569. M. appressa Gooding  
Arizona and Mexico, native.  
Open slopes: Baja California Sur and Baja California  
Norte.

570. *M. arenacea* (Buckl.) Hitchc.  
U. S. and northern Mexico, native.  
Sandy soils: Sonora, Chihuahua, Coahuila, Zacatecas,  
and San Luis Potosi.
571. *M. arenicola* Buckl.  
U. S. and northern Mexico, native.  
Sandy soil: Sonora, Chihuahua, Coahuila, Nuevo Leon,  
Durango, Zacatecas and San Luis Potosi.
572. *M. argentea* Vasey  
Mexico, endemic.  
Open slopes: Chihuahua.
573. *M. arizonica* Scribn.  
U. S. and northern Mexico, native.  
Open slopes: Sonora, Chihuahua, Coahuila, Baja California  
Sur, Sinaloa and Durango.
574. *M. arseni* Hitchc.  
U. S. and northern Mexico, native.  
Open slopes: Baja California Norte.
575. *M. articulata* Scribn.  
Mexico, endemic.  
Gypsum soils: San Luis Potosi, Guanajuato, Queretaro,  
Hidalgo and Guerrero.
576. *M. biloba* Hitchc.  
Mexico, endemic.  
Open slopes: Chihuahua and Durango.
577. *M. brandegei* Reeder  
Mexico, endemic.  
Desert: Baja California Sur.
578. *M. brevifolia* Scribn.  
Mexico, endemic.  
Open slopes: Jalisco and Durango.
579. *M. brevis* Gooding  
U. S. and Mexico, native.  
Swales: Chihuahua, Durango, Zacatecas, San Luis Potosi  
and Mexico.
580. *M. breviseta* Griseb.  
Mexico, endemic.  
Brush: Jalisco, Michoacan, Mexico and Veracruz  
(type loc.: Orizaba).
581. *Muhlenbergia brevivaginata* Swallen  
Mexico, native endemic.  
Reported only for Jalisco.
582. *M. capillaris* (Lam.) Trin.  
U. S., West Indies and Mexico, native.  
Woodland: Chihuahua, Coahuila, Tamaulipas, Sonora,  
to Quintana Roo.
583. *M. ciliata* (HBK) Kunth  
Mexico, Central America, Ecuador, and Peru, native.  
Open slopes: Sonora and Chihuahua south to Chiapas
584. *M. confusa* (Fourn.) Swallen  
Mexico and Guatemala, native.  
Open slopes: northern border states south to Chiapas.
585. *M. crispiseta* Hitchc.  
Mexico, endemic.  
Open slopes: Sonora, Chihuahua, Durango, Zacatecas,  
Nayarit, Jalisco, and San Luis Potosi.

586. M. curvula Swallen  
Mexico, endemic.  
Oak woods: Guanajuato (type loc.) San Luis Potosi,  
and Jalisco.
587. M. decumbens Swallen  
Mexico, endemic.  
Sandy soil: Chihuahua.
588. M. depauperata Scribn.  
U. S. and Mexico, native.  
Open slopes: Chihuahua and Coahuila South to Puebla.
589. M. distans Swallen.  
Mexico and Guatemala, native.  
Open slopes: Durango, Zacatecas, San Luis Potosi  
south to Chiapas.
590. M. distichophylla (Presl) Kunth  
Mexico, endemic.  
Jalisco south to Chiapas.
591. M. diversiglumis Trin.  
Mexico, Central America, Colombia and Venezuela to  
Peru, native.  
Oak brush: Sinaloa south to Chiapas.
592. M. dubia Fourn.  
U. S. and Mexico, native.  
Pine savanna: Chihuahua and Nuevo Leon south to  
Veracruz and Puebla.
593. M. dubioides Gooding  
U. S. and northern Mexico, native.  
Canyons: Coahuila and Chihuahua.
594. M. dumosa Scribn.  
U. S. and Mexico, native.  
Cayons, Baja California Sur, Sonora and Chihuahua; south  
to Oaxaca.
595. M. elongata Scribn.  
Mexico, endemic.  
Open slopes: Sonora and Chihuahua; also Mexico acc. to  
Matuda.
596. M. eludens C. Reeder  
U. S. and northern Mexico, native.  
Rocky woods: Sonora, Chihuahua and Durango.
597. M. emersleyi Vasey  
Southwestern U. S. to Panama, native.  
Pine-oak forests: northern border states south to  
Chiapas.
598. M. eriophylla Swallen  
Mexico, endemic.  
Oak woods: Mexico.
599. Muhlenbergia expansa (Dc)Trin.  
United States and Mexico, native.  
Reported for Veracruz.
600. M. filiformis (Thurb.) Rydb. var. fortis Kelso.  
U. S. and Mexico, native.  
Swales: Baja California Norte and Durango.
601. M. firma Beal  
Mexico, endemic.  
Pine savanna: Coahuila, San Luis Potosi south to  
Oaxaca (type loc.).

602. M. flavida Vasey  
Mexico, endemic.  
Open slopes: Sonora, Chihuahua, Durango, Jalisco and Hidalgo.
603. M. flaviseta Scribn.  
Mexico, endemic.  
Pine savanna: Durango.
604. M. fragilis Swallen  
U. S. and Mexico, native.  
Open ground: Northern border states south to Oaxaca y Veracruz.
605. M. gigantea (Fourn.) Hitchc.  
Mexico, endemic.  
Pine savanna: Sonora and Durango south to Chiapas.
606. M. glabrata (HBK) Kunth  
Mexico, endemic.  
Pine savanna: Nuevo Leon, San Luis Potosi, Guanajuato (type loc.) south to Puebla.
607. M. glauca (Nees) Mez  
(M. huahuacana Vasey)  
U. S. And northern Mexico, native.  
Pine savanna: Chihuahua an Coahuila south to Mexico.
608. M. goodingii Soderstom  
Arizona and Sonora, native.  
Desert: Sonora.
609. M. grandis Vasey  
Mexico, endemic.  
Canyon: Nayarit and Jalisco.
610. M. gypsophila Reeder and Reeder  
Mexico, endemic.  
Gypsophorous soils: Coahuila, Nuevo Leon and San Luis Potosi.
611. M. hintoni Swallen  
Mexico, endemic.  
Central mountains: Mexico.
612. M. implicata (HBK) Kunth  
Mexico, Central America to Colombia and Venezuela, native.  
Wet. banks: Chihuahua south to Chiapas.
613. M. iridifolia Soderstrom  
Mexico, endemic.  
Pine savanna: Jalisco.
614. Muhlenbergia jaliscana Swallen  
Mexico, endemic. Pine woods.  
Reported only for Jalisco.
615. Muhlenbergia laxa Hitchc.  
Mexico, endemic, wet places  
Veracruz, "Orizaba".
616. M. leptoura (Piper) Hitchc.  
Mexico, endemic.  
Pine savanna: Sonora and Chihuahua.
617. M. lindheimeri, Hitchc.  
Texas and Coahuila, native.  
Limestone: Coahuila.

618. M. longiglumis Vasey  
Mexico, endemic.  
Pine savanna: Aguascalientes, Jalisco and Michoacan.
619. M. longiligula Hitchc.  
U. S. and Mexico, native.  
Canyons: Sonora, Chihuahua, Coahuila, Nuevo Leon and Durango.
620. M. lucida Swallen  
Mexico, endemic.  
Pine savanna: Chihuahua, Guanajuato and Mexico.
621. M. macrotis (Piper) Hitchc.  
Mexico, endemic.  
Pine savanna: Chihuahua, Sinaloa and Durango south Chiapas.
222. M. macroura (HBK) Hitchc.  
Mexico and Guatemala, native.  
Open slopes: Chihuahua and Nuevo Leon south to Chiapas.
624. M. microsperma (DC) Kunth  
U. S., Mexico, Colombia and Venezuela to Peru, native.  
Moist banks:  
south to Chiapas.
625. M. minutissima (Steud.) Swallen  
U.S. and Mexico, native.  
Moist banks: Baja California Norte, Chihuahua, and south to Mexico Puebla and Tlaxcala.
626. M. montana (Nutt.) Hitchc.  
U. S., Mexico and Guatemala, native.  
Pine savanna: Sonora, Chihuahua, and Coahuila south to Oaxaca.
627. M. mutica (Rupr.) Hitchc.  
Mexico, endemic.  
Pine savanna: Veracruz and Chiapas.
628. M. nigra Hitchc.  
Mexico and Guatemala, native.  
Pine savanna: Guanajuato, Jalisco, Tlaxcala, Puebla Mexico and Chiapas.
629. Muhlenbergia oreophila Swallen  
Mexico and Guatemala, native.  
Mexico (type loc. for M. matudae Sohns)
630. M. palmeri Vasey  
Mexico, endemic.  
Pine savanna: Chihuahua and Michoacan.
631. M. parviglumis Vasey  
U. S., Cuba and Mexico, native.  
Rocky slopes: Chihuahua, Coahuila, Nuevo Leon Tamaulipas and San Luis Potosi.
632. M. pauciflora Buckl  
U. S. and northern Mexico, native.  
Rocky slopes: Baja California Norte, Sonora, Chihuahua, Coahuila and Nuevo Leon.

633. M. pectinata C. Gooding  
Arizona and Mexico, native.  
Rocky slopes: Sonora, Chihuahua, Durango, Jalisco,  
Michoacan, Mexico.
634. M. plumbea (Trin.) Hitchc.  
Mexico, endemic.  
Central mountains: Mexico, Puebla and Tlaxcala.
635. M. polycaulis Scribn  
U. S. and Mexico, native.  
Rocky slopes: Sonora to Coahuila and south to Hidalgo.
636. M. porteri Scribn.  
U. S. and Mexico, native.  
Brush: Baja California Norte, Sonora, Chihuahua, Coahuila  
Nuevo Leon, Tamaulipas and Durango.
637. M. presliana Hitchc.  
Mexico and Guatemala, native.  
Pine savanna: Chiapas.
638. M. pubescens (HBK) Hitchc.  
Mexico, endemic.  
Pine savanna: Chihuahua, Coahuila and Nuevo Leon  
south to Oaxaca.
639. M. pubigluma Swallen  
Mexico, endemic.  
Canyons: Chihuahua, Coahuila and Nuevo Leon.
640. M. pulcherrima Scribn.  
Arizona and Mexico, native.  
Pine savanna: Chihuahua, Durango and Morelos.
641. M. purpusii Mez  
Mexico, endemic.  
Gypsum soils: San Luis Potosi (type loc.) Chihuahua,  
Coahuila.
642. M. pusilla Steud.  
Mexico and Guatemala, native.  
Mountain meadows: Sonora and Chihuahua south to Chiapas.
643. M. quadridentata (HBK) Kunth  
Mexico and Guatemala, native.  
Pine savanna: Sonora and Chihuahua south to Chiapas.
- 643a. M. racemosa (Michx) BSP
644. M. ramulosa (HBK) Swallen  
Mexico to Costa Rica, native.  
Meadows: Jalisco and San Luis Potosi, south to Chiapas.
645. M. reederorum Soderstrom  
Mexico, endemic.  
Canyons: Durango and Michoacan.
646. M. repens (Presl) Hitchc.  
U. S. and Mexico, native.  
Sandy soil: northern border states south to Oaxaca.
647. Muhlenbergia reverchoni Vasey & Scribn.  
United States and Mexico.  
Reported from Puebla.
648. M. richardsonis (Trin.) Rydb.  
Canada south to Mexico, native.  
Meadows: northern border states south to Puebla.

649. M. rigens (Benth.) Hitchc.  
U. S. and Mexico, native.  
Canyons: northern border states south to Puebla.
650. M. rigida (HKB) Kunth  
U. S. and Mexico, native.  
Canyons: northern border states south to Oaxaca.
651. M. robusta (Fourn.) Hitchc.  
Mexico, endemic.  
Oak-pine savanna: Sonora and Chihuahua south to Chiapas.
652. M. schmitzii Hack.  
Mexico, endemic.  
Pine savanna: Chihuahua, Hidalgo and Mexico.
653. M. schreberi Gmel.  
U. S. and Mexico, native.  
Woods: Queretaro, Hidalgo and Veracruz.
654. M. scoparia Vasey  
Mexico, endemic.  
Pine savanna: Sonora and Chihuahua south to Michoacan
655. M. seatonii Scribn.  
Mexico, endemic.  
Pine savanna: Puebla and Tlaxcala.
656. M. setarioides Fourn.  
Mexico and Central America, native.  
Pine savanna: Veracruz and Chiapas.
657. M. setifolia Vasey  
Texas, New Mexico and northern Mexico, native.  
Calcareous soil: Chihuahua, Tamaulipas and San Luis Potosi.
658. M. shepherdii (Vasey) Swallen  
Mexico, endemic.  
Ledges: Sonora, Chihuahua and Durango.
659. M. sinuosa Swallen  
U. S. and Mexico, native.  
Moist slopes: Sonora and Chihuahua.
660. M. speciosa Vasey  
Mexico, endemic.  
Pine savanna: Chihuahua south to Puebla.
661. M. spiciformis Trin.  
Mexico, endemic.  
Pine savanna: San Luis Potosi, Michoacan, Hidalgo, Veracruz, Oaxaca and Chiapas.
662. M. stricta (Presl) Kunth  
Mexico, endemic.  
Pine savanna: Durango, Nayarit, Jalisco, Colima, Michoacan, Mexico, Molrelos, Veracruz and Oaxaca.
663. M. strictior Scribn.  
Mexico, endemic,  
Pine savanna: Sonora, Chihuahua, Durango and Mexico.
664. M. subaristata Swallen  
Mexico, endemic.  
Canyon: Durango.
665. M. subbiflora Hitchc.  
Mexico, endemic.  
Moist slopes: Durango.



666. M. tenella (HBK) Trin  
Mexico to Panama  
Moist slopes: Sonora and Chihuahua south to Chiapas.
667. M. tenuifolia (HBK) Trin.  
Mexico, endemic.
668. M. tenuissima (Presl) Kunth  
Mexico and Panama, native.  
Moist slopes: Nayarit, Jalisco, Colima and Michoacan
669. M. torreyi (Kunth) Hitchc  
U. S. and northern Mexico, native.  
Grasslands: Sonora, Chihuahua and San Luis Potosi.
670. M. utilis (Torr.) Hitchc.  
U. S. and Mexico, native.  
Grassland: Chihuahua, Coahuila, Durango, San Luis Potosi, Hidalgo and Mexico.
671. M. vaginata Swallen  
Mexico and Guatemala, native.  
Meadows: Sinaloa, Durango, Guanajuato, Michoacan, Mexico and Hidalgo.
672. M. versicolor Swallen  
Mexico, endemic.  
Pine savanna: Nayarit south to Chiapas.
673. M. villiflora Hitchc.  
Mexico, endemic.  
Gypsum soils: Coahuila, Nuevo Leon, Durango, Zacatecas, San Luis Potosi and Hidalgo.
674. M. virescens (HBK) Kunth  
New Mexico and Arizona south to Mexico, native.  
Canyons: northern border states south to Michoacan and Mexico.
675. M. virletii (Fourn.) Soderstrom  
Mexico, endemic.  
High plains: Durango south to Puebla.
676. M. watsoniana Hitchc.  
Mexico, endemic.  
Desrt: Chihuahua, San Luis Potosi, and Jalisco.
677. M. wolfii (Vasey) Rydb.  
U. S. and Mexico, native.  
Pine savanna: Baja California Norte, Baja California Sur, Sonora, Chihuahua and Durango.
678. M. wrightii Vasey  
U. S. and Mexico, native.  
Grasslands: Baja California Norte, Sonora and Chihuahua, also Tamaulipas.
679. M. xanthodos Soderstrom  
Mexico, endemic.  
Pine savanna: Chiapas.
680. Muhlenbergia xerophila C. O. Gooding  
Arizona and adjacent Mexico, native.  
Reported from Sonora.

## MUNROA Torr.

## Eragrosteae

One species in western N. America and two in Argentina.

681. M. squarrosa (Nutt.) Torr.  
Canada, U. S. and Mexico, native.  
Grassland: Chihuahua and Coahuila.

## NEYRAUDIA Hook. f.

Arundineae

Small, Old World genus.

682. *N. reynaudiana* (Kunth) Keng.  
Introduced.  
Cultivated or escaped: Veracruz.

## OLMECA Soderstrom

Two species in Mexico.

- 682a. *O. recta* Soderstrom  
native, endemic.  
Veracruz.
- 682b. *O. reflexa* Soderstrom  
native, endemic.  
Veracruz, Oaxaca and Chiapas.

## OLYRA L.

Olyreae

25 species in the American tropics, one in Africa.

683. *O. cordifolia* HBK  
Southern Mexico, Venezuela to Paraguay, native.  
Tropical forest margin: Chiapas, also San Luis Potosi.
684. *O. latifolia* L.  
Florida, Mexico and West Indies south to Brazil and  
northern Argentina, native.  
Tropical forest margin: Nayarit, San Luis Potosi south to  
the Yucatan Peninsula.
685. *O. yucatana* Chase  
Mexico, Guatemala and British Honduras, native.  
Tropical forest margin: Oaxaca, Chiapas and the Yucatan  
Peninsula.

## OPIZIA Presl

Chlorideae

Monotypic

686. *O. bracteata* McVaugh  
— and from michoacana
- 686a. *O. stolonifera* Presl  
Cuba and Mexico, native.  
Dry slopes and flats: Nayarit, Tamaulipas south to  
Yucatan.

## OPLISMENUS Beauv.

Paniaceae

Ten species, tropics, worldwide.

687. *O. affinis* Schult.  
Pantropical, introduced?  
Weedy: Sonora and Baja California Sur south to the  
Yucatan.
- 687a. *O. affinis* var. *humboldtianus* (Nees) Scholz
688. *O. hirtellus* (L.) Beauv.  
Mexico and West Indies south to Argentina, native.  
Forest margin: northern border states south to  
Yucatan Peninsula.
689. *O. rariflorus* Presl  
Southern Mexico south to Peru, native.  
Pine savanna: Sinaloa south to Chiapas.

690. *O. setarius* (Lam.) R. & S.  
 U. S., West Indies and Mexico south to northern  
 Argentina, native.  
 Forests: Nuevo Leon an Nayarit and  
 to Quintana Roo.

## ORCUTTIA Vasey

## Festuceae

Five species in California and Baja California.

691. *O. californica* Vasey  
 California and Baja California, native.  
 Vernal pools: Baja Norte
692. *O. fragilis* Swallen  
 Mexico, endemic.  
 Vernal pool: Baja Sur

## ORTHOCLADA Beauv.

## Eragrosteae

Monotypic.

693. *O. laxa* (L. Rich.) Beauv.  
 Mexico, south to Peru and Brazil, native.  
 Tropical forest margin: Oaxaca, Veracruz, Chiapas and  
 Tabasco.

## ORYZA L.

## Oryzeae

Twenty-nine species, pantropical.

694. *O. alta* Swallen  
 Mexico to Paraguay, native.  
 Aquatic: Tabasco, Chiapas and Campeche
695. *O. latifolia* Desv.  
 Mexico and West Indies south to Paraguay and Brazil,  
 native.  
 Aquatic: Sinaloa, Nayarit, Jalisco, Colima, Oaxaca,  
 and Campeche
696. *O. perennis* Moench.  
 West Indies, Mexico, Brazil, native.  
 Aquatic: Oaxaca, Veracruz and Chiapas.
697. *O. sativa* L.  
 Introduced.  
 Cultivated:

## ORYZOPSIS Michx.

## Stipeae

Twenty species, temperate, worldwide.

698. *O. florulenta* Pilger  
 Mexico to Colombia, native.  
 Central mountains: Mexico, Tlaxcala and Puebla.
699. *O. hymenoides* (R. & S.) Ricker  
 U. S. and Mexico, native.  
 Sandy soil: Baja Norte.

## OTATEA (McClure &amp;

## Calderon &amp; Soderstrom

to species in Mexico.

- 699a. *O. acuminata* (Munro) Calderon & Soderstrom  
 Central Mexico, endemic.
- 699b. *O. fimbriata* Calderon & Soderstrom  
 Central and Mexico, endemic.

## PANICUM L.

Paniceae

Probable 500 species, pantropical and subtropical, occasional temperate.

700. P. aciculare Desv. var. aciculare  
United States, Mexico, Honduras and northern South America.  
Nativa, grasslands.
- 700a. P. aciculare var. arenicoloides (Ashe) Beetle
- 700b. P. aciculare var. ovinum (Scribn. & Smith) Beetle  
Reported from Veracruz.
701. P. acuminatum Sw. var. acuminatum.
- 701a. P. acuminatum var. implicatum (Scribn.) Beetle
- 701b. P. acuminatum var. lindheimeri (Nash) Fernald
- 701c. P. acuminatum var. pilosum (Torr.) Beetle
702. P. (Dichanthelium) albomaculatum Scribn.  
Mexico and Guatemala, native.  
Rocky hills: Jalisco, Michoacan and Mexico also  
Nuevo Leon Tamaulipas and Hidalgo.
703. P. altum Hitchc. & Chase  
Mexico to Panama, native.  
Reported from Quintana Roo.
704. P. amarulum Hitchc. (# Virgata)  
U. S., Bahama, Cuba and Mexico, native.  
Coastal dunes: Veracruz, Chiapas, Tabasco, Campeche  
and Quintana Roo.
705. P. amarum Ell. (# Virgata)  
U. S. and West Indies and Mexico.  
Coastal dunes: "eastern coast of Mexico" acc. to Gould:  
Grasses of Texas.
706. P. antidotale Retz. (# Maxima)  
Introduced.  
Cultivated and escaped: scattered localities throughout  
Mexico.

707. P. arundinariae Trin. (# Parviglumia)  
Mexico to Panama, native.  
"Southern Mexico" according to Swallen: Grasses of  
Gautemala. Also reported for San Luis Potosi by  
Hernandez-X; Veracruz. Veracruz, Oaxaca, Chiapas.
708. P. bartlettii Swallen (# Trichoidea)  
Mexico, Guatemala and British Honduras, native.  
Moist woods: San Luis Potosi, Hidalgo, Veracruz, Oaxaca,  
Chiapas, Campeche and Quintana Roo.
709. P. biglandulare Scribn. & Smith (# Stolonifera)  
Mexico and Guatemala, native.  
Pine-oak savanna: Guerrero, Oaxaca and Chiapas.
710. P. boliviense Hack.  
Mexico to Argentina, native.  
Woods: Tamaulipas, San Luis Potosi, Veracruz, Oaxaca,  
Chiapas and Tabasco.
711. P. breviramsum Swallen  
Mexico and Guatemala, native.  
Pine savanna: Chiapas, acc. to Gould.
712. P. bulbosum HBK (# Maxima)  
U. S., Mexico, Guatemala, Colombia, Ecuador, native.  
Brush: throughout Mexico except for Baja California Norte  
and the Yucatan Peninsula.
713. P. (Dichantherium) caerulescens Hack.  
U. S., Cuba and Mexico, native.  
Marshes: Quintana Roo.
714. P. capillare L. (# Capillaria)  
U. S. and Mexico, native.  
Weedy: northern border states, Baja California Norte, Sonora  
and Coahuila.
715. P. capillarioides Vasey (# Difusa)  
Grassland: Texas and northern Mexico, native.  
Sandy soil: Nuevo Leon, Tamaulipas and San Luis Potosi.

716. P. cayennense Lam. (# Capillaria)  
Mexico and West Indies to Panama and northern S. America,  
native. Oaxaca, Veracruz and Campeche.
717. Panicum cliyum Sohns  
Mexico, native, endemic.  
States of Hidalgo and Mexico.
718. P. coloratum L.  
Introduced.  
Cultivated: Sonora, Coahuila.
719. P. (Dichanthelium) commutatum Schult.  
U. S. and Mexico.  
Brush: Tamaulipas, Jalisco south to Chiapas.
- 719a. P. commutatum var. joorii (Vasey) Fernald
720. P. cordovense Fourn.  
Mexico, endemic.  
Brush: Veracruz, Hidalgo.
721. Panicum crateriferum Sohns.  
Mexico, native, endemic.  
Known only from Guerrero.
722. P. cupreum Hitchc. & Chase (# Laxa)  
Mexico, endemic.  
Brush: Mexico (type loc.) and Durango.
723. P. cyanescens Nees  
Mexico, Central America to Peru and Brazil, native.  
Stream bottoms: Chiapas and Tabasco.
724. P. decolorans HBK (# Capillaria)  
Mexico and Central America, native.  
Brush: Chihuahua, Sinaloa, Coahuila, San Luis Potosi,  
south to Chiapas.
- 724a. Panicum decolorans HBK var. parcum (Hitchc. & Chase) Beetle  
Mexico, native, endemic.  
Central states.
725. Panicum dichotomum L. var. dichotomum  
United States and Mexico, native & various Island of the Caribbean.  
Woods, wet sandy soils, Hidalgo south to Chiapas.
- 725a. Panicum dichotomum var. tenue (Muhl.) Beetle  
Dichanthelium dichotomum var. tenue (Muhl.) Gould  
and Clark, Ann. Missouri Bot. Gard 65:1119. 1878.  
Coastal plain of eastern United States and west to  
Texas and southern Mexico. Reported from Chiapas.  
P. dichotomiflorum Michx. (# Dichotomiflora)  
Canada, U.S., and West Indies, Mexico, native.  
Weedy: Chihuahua to Colima.
726. Panicum diffusum Sw. (# Diffusa)  
U.S. and West Indies, Mexico to Brazil, native.  
Weedy: Coahuila, Nuevo Leon and Tamaulipas.
727. P. (Dichanthelium) ensifolium Baldw.  
U. S. and Mexico, native.  
Bogs: Chihuahua, Hidalgo and Chiapas.
728. Panicum filipes Scribn.  
Texas and Mexico, native.  
Grasslands, Coahuila, Nuevo Leon and Tamaulipas  
south to Oaxaca.
729. P. frondescens Meyer (# Stolonifera)  
Mexico and Central America to northern Argentina, native.  
Woods: Veracruz, Oaxaca, Chiapas and Tabasco.

730. P. ghiesbreghtii Fourn. (# Diffusa)  
U.S., West Indies, Cuba and Mexico to northern  
South America, native.  
Brush: Throughout Mexico, except for Baja California.
731. P. glutinosum Sw.  
Mexico, West Indies to Argentina, native.  
Forests: Hidalgo south to Chiapas.
732. P. gouinii Fourn. (# Virgata)  
U. S. and Mexico, native.  
Coastal: Veracruz.
733. P. hallii Vasey (# Diffusa)  
U. S. and Mexico, native.  
Clay soils: northern border states (except for Baja  
Calif.) south to Hidalgo.
734. P. havardii Vasey (# Virgata)  
U. S. and Mexico, native.  
Sandy soil: Chihuahua.
735. P. hians Ell. (# Laxa)  
U. S. and Mexico, south to Panama, native.  
Coastal plain: Tamaulipas and Veracruz; also Nayarit,  
Jalisco, Guanajuato and Michoacan.
736. P. hintoni Swallen  
Mexico endemic.  
Central mountains: Mexico (type loc.).
737. P. hirsutum Sw. (# Diffusa)  
West Indies and Mexico south to Brazil, native.  
Sandy soil: Colima, San Luis Potosi south to Campeche.
738. P. hirticaule Presl (# Capillaria Var. hirticaule)  
U. S. Cuba and Mexico south to Argentina, native.  
Weedy: common throughout Mexico.
- 738a. Panicum hirticaule var. miliaceum (Vasey) Beetle  
United States and Mexico  
Common in Baja California and Sonora.
- 738b. Panicum hirticaule var. pamminosum (Hitchc. & Chase)  
Beetle Mexico and Guatemala, native.  
Sonora and Chihuahua south to Oaxaca.
- 738c. Panicum hirticaule var. stramineum (Hitchc. & Chase) Beetle  
U.S. and Mexico, native.  
Sonora, Sinaloa, Durango, Nuevo Leon, Nayarit,  
Michoacan and Guerrero.
739. Panicum hirtum Lam.  
Mexico and Belice south to South America.  
Native, reported from Oaxaca and Chiapas.
740. P. ichnanthoides Fourn.  
Mexico and Central America, native.  
Dry slopes: Jalisco, Querétaro, Puebla, Veracruz and Chiapas.
741. P. (Dichanthelium) laxiflorum Lam.  
U. A. and Mexico, native.  
Nuevo Leon and Tamaulipas south to Chiapas.
742. P. laxum Sw.  
West Indies, Mexico, Central America to Paraguay, native.  
Coastal brush Sinaloa south to Chiapas; Tamaulipas and  
San Luis Potosi south to Yucatan.
743. P. lepidulum Hitchc. & Chase (#Diffusa)  
Mexico and Guatemala, native.  
Weedy: Sonora, Chihuahua and Coahuila south to Chiapas.

744. Panicum leucoblepharis Trin. var. rubescens (Vasey) Beetle  
United States and Mexico;  
Wet depressions, Veracruz, Oaxaca, and Chiapas.
745. P. longum Hitchc. and Chase (# Laxa)  
Mexico, endemic.  
Brush: Veracruz (type loc.).
746. Panicum macrospermum Gould  
Mexico, native, endemic.  
Reported from San Luis Potosi and Queretaro.
747. P. maximum Jacq. (# Maxima)  
Introduced.  
Cultivated and escaped: common throughout Mexico except  
for Baja California.
748. P. mertensii Roth  
Mexico and Central America south to Argentina, native.  
Swamps: Tabasco, Jalisco.
749. P. (Dichanthelium) nodatum Hitchc. and Chase  
Texas and Tamaulipas, native.  
Grassland: Tamaulipas.
750. P. obtusum HBK  
U. S. and Mexico, native.  
Grasslands: northern border states south to Puebla.
751. P. oligosanthos Schult.  
U. S. to northern Mexico, native.  
Woodlands:
- 751a. Panicum oligosanthos var. scribnerianum (Nash) Fernald  
U. A. and Mexico, native.  
Brush: Sonora, Chihuahua and Coahuila.
752. P. olivaceum Hitchc. & Chase  
Mexico, Central America and Venezuela.  
Pine savanna: Veracruz, Oaxaca and Chiapas.
753. Panicum ovale Elliott var. addisonii (Nash)  
Eastern United States and Mexico.  
Common in oak or oak-pine forest, Nuevo Leon and  
Tamaulipas south to Chiapas.  
Dichanthelium ovale (Elliott) Gould and Clark  
Var. addisonii (Nash) Gould and Clark, Brittonia 32:360.1980.
754. P. parviglume Hack. (#Parviglume)  
Mexico, Guatemala, British Honduras and Costa Rica,  
Native.  
Pine-oak savanna: Veracruz and Chiapas.
755. P. (Dichanthelium) pedicellatum Vasey  
Texas and Mexico, native.  
Limestone: Coahuila, Nuevo Leon, Tamaulipas and Hidalgo.
756. P. pilcomayense Hack.  
Introduced: (S.E. Texas and N.E. Mexico).  
Cultivated: Nuevo Leon.
757. P. pilosum Sw. (# Laxa)  
Mexico and West Indies to Argentina, native.  
Swamps: Nayarit, San Luis Potosi, Veracruz, Guerrero, Oaxaca.  
Chiapas, Tabasco and Quintana Roo.
758. P. plenum Hitchc. & Chase (# Maxima)  
U. S. and Mexico, native.  
Grassland: Sonora, Chihuahua, Coahuila, Durango, Guerrero  
and Veracruz.



759. *P. polygonatum* Scharad. (# Laxa).  
Southern Mexico to Paraguay, native.  
Stream bottoms: Veracruz, Oaxaca and Chiapas.
760. *P. (Dichanthelium) pseudonubescens* Nash  
U. S., Mexico and Guatemala, native.  
Oak-savanna: San Luis Potosi.
761. *P. pulchellum* Raddi (# Stolonifera)  
Mexico, British Honduras, Martinique to Bolivia and  
Brazil, native.  
Stream bottoms: Veracruz, Oaxaca and Chiapas.
762. *P. repens* L.  
Introduced from Europe.  
Reported from Tamaulipas and Veracruz.
763. *P. rigidulum* Nees (# Agrostoides)  
U. S., West Indies and Mexico, native.  
Streambanks: Coahuila, Veracruz and Chiapas.
764. *P. rudgei* R. & S.  
Mexico, Jamaica and Trinidad to Bolivia and Brazil,  
native.  
Brush: Tabasco.
765. *P. rugulosum* Trin.  
Mexico to Brazil, native.  
Swamps: Veracruz, Oaxaca, Chiapas and Tabasco.
766. *P. sabulorum* var. *patulum* (Scribn. & Merr.).  
*P. nashianum* var. *patulum* Scribn. & Merr.
767. *P. schiffneri* Hack. (# Parvigluma)  
Mexico to Brazil, native.  
Streambanks: Veracruz, San Luis Potosi, Guanajuato,  
Mexico and Chiapas.
768. *P. schmitzii* Hack. (# Parvigluma)  
Mexico, endemic.  
Brush: San Luis Potosi, Veracruz and Oaxaca.
769. *P. sellowii* Nees  
Mexico and West Indies south to Paraguay and Argentina,  
native.  
Brush: Veracruz, Oaxaca, Chiapas and Tabasco.
770. *P. (Dichanthelium) sohaerocarpon* Ell.  
U. S. and Mexico south to Venezuela, native.  
Open slopes: northern border states south to Chiapas.
771. *P. stagnatile* Hitchc. and Chase  
Mexico and Central America, native.  
Swamps: Veracruz, Chiapas and Tabasco.
772. *P. stoloniferum* Poir. (# Stolonifera)  
Southern Mexico and Guatemala south to Argentina,  
native. Swamps: Chiapas.
773. *P. succosum* Hitchc. and Chase  
Mexico, endemic.  
Ponds: Jalisco (type loc.) and Mexico.
774. *Panicum tenerum* Beyr.  
Southeastern U. S., West Indies, Belize.  
Reported from Quintana Roo.
775. *P. transiens* Swallen  
Mexico and Guatemala, native.  
Mountain mesa: Nuevo Leon and Tamaulipas (type loc.);  
also Hidalgo.

776. *P. trichanthum* Nees (# Trichoidea)  
Mexico and West Indies to Paraguay, native.  
Swamps: Colima, San Luis Potosi, Veracruz, Oaxaca,  
Campeche and Quintana Roo.
777. *P. trichoides* Swartz (# Trichoidea)  
Mexico and West Indies South to Peru and Brazil.  
Coastal plain, thickets: Sonora south to Chianas;  
San Luis Potosi south to Yucatan.
778. *Panicum turckheimii* Hack.  
Mexico and Guatemala  
Reported from Chiapas (Palenque).
779. *P. vasevanum* Scribn. (# Dichotomiflora)  
Mexico, endemic.  
Brush: Chihuahua, Aguascalientes, Jalisco and Michoacan.
780. *P. venosum* Swallen  
Mexico, endemic.  
Ditch: Michoacan (type loc.)
781. *P. virgatum* L. (# Virgata)  
U. S. and Mexico, native.  
Grassland: Sonora, Baja California Sur, Chihuahua,  
Jalisco, Nayarit, Oaxaca and Chianas.
782. *P. (Dichanthelium) viscidellum* Scribn.  
Mexico, Central America and Colombia, native.  
Pine savanna: Veracruz.

## PAPPOPHORUM Schreb.

## Pappophoreae

Ten species in the Americas.

783. *P. bicolor*ourn.  
U.S. and Mexico, native.  
Grassland: Chihuahua, Coahuila, Nuevo Leon,  
Tamaulipas, San Luis Potosi, Mexico and Veracruz.
784. *P. pappiferum* (Lam.) Kuntze  
Mexico and South America, native.  
Brush: Veracruz and Oaxaca.
785. *P. subbulbosum* Arech.  
Mexico and South America, native.  
Brush: Sonora.
786. *P. vaginatum* Buckl.  
U. S. and Mexico, native.  
Brush: Sonora, Chihuahua, Coahuila, Nuevo Leon, Durango  
and Zacatecas.

## PARAPHOLIS Hubb.

Monerneae

Five or 6 species, Old World.

- 787.
- P. incurvus
- (L.) C. E. Hubb.

Introduced.

Sea marshes: Baja Norte.

## PASPALIDIUM Stapf

Paniceae

Five or 6 species, Old World.

- 788.
- P. geminatum
- (Forsk.) Stapf var.
- geminatum

Introduced.

Aquatic: scattered localities throughout Mexico.

- 788a.
- P. geminatum
- var.
- paludivagum
- (Hitchc. and Chase)
- 
- Gould

U. S. and Mexico south to Argentina, native.

Swamps: Jalisco and Michoacan; also Tamaulipas

## PASPALUM L.

Paniceae

Four hundred species in tropics and subtropics,  
worldwide.

- 789.
- P. acuminatum
- Raddi

U. S. and Mexico south to Argentina, native.

Aquatic: Michoacan and Morelos.

- 790.
- Paspalum acutum
- Chase

Mexico and Panama, native.

Irrigation ditches, reported from Veracruz.

- 791.
- P. adoerians
- (Fourm.) Chase

Mexico and Central America, native.

Aquatic: Veracruz (type loc.) Oaxaca and Chiapas.

- 792.
- P. affine
- Steud.

Mexico and Guatemala, native.

Swamps: Veracruz, Chiapas, Hidalgo and Oaxaca.

- 793.
- P. alcalinum
- Mez

Mexico to Paraguay and Argentina, native.

Swamps: San Luis Potosi (type loc.), Jalisco and Chianas

- 794.
- P. arsenei
- Chase

Mexico, endemic.

Mountain slopes: Aguascalientes and San Luis Potosi  
south to Oaxaca.

- 795.
- P. blodgettii
- Chapm.

U. S., Mexico, West Indies and Central America, native.

Yucatan Peninsula

796. P. botterii (Fourn.) Chase  
Mexico and Central America, native.  
Swamps: Sonora south to Chiapas, Nuevo Leon south to Yucatan.
797. P. caespitosum Flugge  
U. S., West Indies, Mexico and Central America, native.  
Pine savanna: Tamaulipas and Nuevo Leon, Veracruz, Chiapas, Tabasco and the Yucatan Peninsula.
798. P. candidum (Humb. & Bonpl.) Kunth  
Southern Mexico to Chile, native.  
Weedy: Michoacan, Morelos, Guerrero, Veracruz and Chiapas.
799. P. clavuliferum Wright  
Mexico and Central America to Brazil, native.  
Brush: Sinaloa, Nayarit, Jalisco, Colima, Oaxaca, Chiapas and Yucatan.
800. P. conjugatum Bergius  
U. S. and Mexico to Argentina, native.  
Tropical forest margin: Sinaloa south to Chiapas; Nuevo Leon and Tamaulipas south to Quintana Roo.
- 800a. P. conjugatum var. parviflorum Doell.  
Coastal: same distribution as the species.
- 800b. P. conjugatum var. pubescens Doell.  
Mexico to Brazil, native.  
Tropical forest margin: San Luis Potosi, Veracruz, Hidalgo, Chiapas and Campeche.
- 800c. Paspalum conjugatum forma tristachya (Vanderyst) Beetle  
Scattered locations throughout the range of the species.  
In Mexico reported from Jalisco, Guerrero, Tabasco and Oaxaca.
801. P. conspersum Schrad.  
Southern Mexico to Argentina, native.  
Marshes: Nayarit, Jalisco and Morelos, San Luis Potosi, Veracruz and Oaxaca.
802. P. convexum H. & B.  
Mexico, Caribbean to Brazil, native.  
Oak brush: Sonora and Chihuahua south to Chiapas.
803. P. crassum Chase  
Mexico, endemic.  
Brush: Jalisco, Colima (type loc.), Michoacan and Mexico, also Guerrero and Chiapas.
804. P. crinitum Chase  
Mexico, endemic.  
Brush: Coahuila and Nuevo Leon, San Luis Potosi (type loc.), Jalisco and Puebla.
805. P. culiacanum Vasey  
Mexico, endemic.  
Mountains: Sinaloa.
806. P. cymbiforme Fourn.  
Mexico and Central America, native.  
Brush: Mexico (type loc.) and Veracruz, Oaxaca, Chiapas.
807. Paspalum densum Poir.  
West Indies, Panama, Brazil and Bolivia, Native.  
Reported for Isla Guadalupe.

808. P. dilatatum Poir.  
Introduced, Ditches Veracruz, Michoacan, Baja California Norte.
809. P. distichum L.  
U. S. and West Indies south to Argentina, native.  
Ditches: Throughout Mexico except for the Yucatan Peninsula.
810. P. erectum Chase  
Mexico, endemic.  
Colima (type loc.), and Jalisco.
811. P. fasciculatum Willd.  
Mexico south to Argentina, native.  
Swamps: Veracruz, Oaxaca, Chiapas, Tabasco and Campeche.
812. P. fimbriatum HBK  
Introduced?  
Weedy: Yucatan and Quintana Roo, Baja California (Isla Guadalupe)
813. P. guayanarum Beetle  
Mexico, endemic.  
Ledges: Sinaloa (type loc.) and Nayarit.
814. P. hartwegianum Fourn.  
Southern Texas and Mexico, native.  
Ditches: scattered localities throughout Mexico except Baja California.
815. P. heterotrichon Trin.  
Mexico south to Brazil, native.  
Ditches: Chiapas.
816. P. humboldtianum Flugge var. humboldtianum  
Mexico to Panama, western South America to Argentina,  
native.  
Pine forests: throughout Mexico except for the Yucatan  
Peninsula and Baja California.
- 816a. Paspalum humboldtianum Flugge var. elegantissima Beetle  
Mexico, endemic.  
Pine or oak woods, Jalisco, Michoacan, Guerrero,  
Morelos, and Colima.
817. Paspalum intermedium Munro  
Mexico south to Peru, native.  
Swamps: Nayarit, Veracruz (type loc. for P. plenum)  
and Tabasco.
818. P. jaliscanum Chase  
Mexico to Guatemala, native.  
Pine forests: Nayarit, Jalisco (type loc.), Michoacan, San Luis  
Potosi, Puebla, Veracruz and Chiapas.
819. P. langei (Fourn.) Nash  
U. S., West Indies and Central America, native.  
Brush: lowland areas of Mexico (absent from the  
central plateau and Baja California).
820. P. lentiginosum Presl  
Mexico and Guatemala, native.  
Swamps: Baja California Sur, Sonora, south to Chiapas; also  
Yucatan.
821. P. leptachne Chase  
Mexico, endemic.  
Brush: Nayarit (type loc.).
822. Paspalum lineare Trin.  
Mexico, West Indies, Central America and  
Argentina, native.  
Reported from Chiapas and Tabasco.

823. P. lividum Trin.  
U. S. and West Indies south to Argentina, native.  
Ditches: scattered localities throughout Mexico except for the Yucatan Peninsula and Baja California
824. P. longicuspe Nash  
Mexico, endemic.  
Swamps: west coast, Nayarit south to Oaxaca (type loc. Jalisco), also Campeche.
825. Paspalum longum Chase  
Native, endemic.  
Described from Socorro Island, Colima.
826. Paspalum luxurians Guzman and Rico  
Mexico, native, endemic.  
Reported from Jalisco and Nayarit.
827. P. malacophyllum Trin.  
Mexico south to Argentina, native.  
Swamps: San Luis Potosi, Veracruz, Chiapas and Yucatan.
828. P. mayanum Chase  
Mexico, endemic.  
Swamps: Yucatan (type loc.) and Chiapas.
829. Paspalum melanospermum Desv.  
Mexico to Brazil, native.  
Collected on Isla Guadalupe.
830. P. millegrana Schrad.  
Mexico south to Brazil, native.  
Swamps: Nayarit, Tamaulipas, Veracruz, Chiapas, Tabasco and Yucatan.
831. P. minus Fourn.  
Texas, West Indies south to Paraguay, native.  
Swamps: Guanajuato, Michoacan, Oaxaca, Veracruz, Chiapas and Tabasco.
832. Paspalum monostachyum Vasey  
Southeastern U.S. and Mexico, native.  
Reported for Veracruz.
833. P. multicaule Poir.  
Mexico, West Indies to Brazil, native.  
Pine woods: Veracruz, Nayarit, Mexico and Oaxaca
834. P. mutabile Chase  
Mexico, endemic.  
Brush: Coahuila, Nuevo Leon, Tamaulipas south to Oaxaca.
835. P. nelsoni Chase  
Mexico, endemic.  
Brush: Chiapas (type loc.), Nayarit.
836. P. notatum Flugge  
U. S. (where introduced?), Mexico, West Indies south to Argentina (where native?).  
Swamps: Lowland, Mexico except for Baja California.
837. Paspalum nutans Lam.  
Mexico to Brazil, native.  
Collected on Isla Guadalupe.
838. P. orbiculatum Poir  
Mexico and West Indies south to Paraguay, native.  
Swamps: Sinaloa, San Luis Potosi, Guerrero, Veracruz, Chiapas and Tabasco.

839. P. palmeri Chase  
Mexico endemic.  
Brush: Sonora (type loc.)
840. P. paniculatum L.  
Mexico and West Indies south to Argentina, native.  
Swamps: Sonora & Baja California Sur south to Chianas  
and eastern San Luis Potosi  
southward through the Yucatan Peninsula.
841. P. paucispicatum Vasey  
Mexico, endemic.  
Brush: Sonora, Chihuahua and Nuevo Leon south to  
Oaxaca; also Campeche.
842. P. pectinatum Nees  
Mexico to southern Brazil, native.  
Pine woods: Sinaloa south to Tabasco.
843. P. plicatulum Michx.  
U. S. and West Indies south to Argentina, native.  
Thickets: Sinaloa south to Chiapas, Nuevo Leon and  
Tamaulipas south to Tabasco.
844. P. prostratum Scribn. & Merr.  
Mexico, endemic.  
Southern Durango south to Chiapas.
- 844a. Paspalum prostratum var. pygmaeum Scribn & Merr.
- 845a. P. pubiflorum Rupr. var. arsenni  
U. S., Cuba and Mexico, native.  
Swamps: northern border states south to Oaxaca and  
Veracruz.
- 845b. P. pubiflorum var. tinctum
846. Paspalum pulchellum Kunth  
Mexico and West Indies south to Brazil, native.  
reported from Oaxaca.
847. Paspalum pygmaeum Hack.  
Mexico, Peru, Venezuela, Bolivia and Argentina, native.  
Reported From Jalisco, Michoacan, Morelos and Veracruz.
848. P. repens Bergius  
Southern Mexico to northern Argentina, native.  
Aquatic: Tabasco, Chiapas and Campeche.
849. Paspalum saccharoides Nees  
Mexico Central America south to Bolivia, native.  
Collected on the Isla Guadalupe.
850. Paspalum secans Hitchc. & Chase  
Mexico and West Indies, native.  
Collected on Isla Guadalupe.
851. P. setaceum Michx. var. setaceum  
U. S. and Mexico, native.  
Tamaulipas, Veracruz and Chiapas.
- 851a. P. setaceum Michx. var. ciliatifolium (Michx.) Vasey  
U. S. and Mexico, native.  
Chihuahua and Veracruz.
- 851b. Paspalum setaceum Michx. var. dispar Guzman  
Mexico, native, endemic.  
Reported from Oaxaca.

852. *P. sparsum* Chase  
Mexico, endemic.  
Brush: Yucatan and Campeche.
853. *P. squamulatum* Fourn.  
Mexico and Central America, native.  
Oak woods: Baja Sur and Sinaloa south to Chiapas.
854. *P. stellatum* Humb. & Bonpl.  
Southern Mexico to Argentina, native.  
Sandy soils, pine woods: Oaxaca and Chiapas.
855. *P. tenellum* Willd.  
Mexico south to Brazil, native.  
Sonora, Aguascalientes, Jalisco, Michoacan, Mexico, Morelos and Chiapas.
856. *P. tinctum* Chase  
Mexico and Guatemala, native.  
Nayarit, Jalisco, Guanajuato (type loc.), Michoacan and Morelos.
857. *P. umbratile* Chase  
Mexico and Central America, native.  
Shady Banks: Nuevo Leon, Tamaulipas, Veracruz and Yucatan.
858. *P. unispicatum* (Scribn. & Merr.) Nash  
Mexico, endemic.  
Jalisco, Nuevo Leon, Tamaulipas south to Chiapas (type loc.: Oaxaca).
859. *P. urvillei* Steud.  
Introduced.  
Nuevo Leon, Aguascalientes, Michoacan & Mexico.
860. *P. vaginatum* Sw.  
U. S., West Indies south to Argentina and Chile, native.  
Coastal: Baja California Sur, Baja California Norte, Sonora, south to Chiapas; Tamaulipas south to Yucatan Peninsula.
861. *P. variabile* (Fourn.) Nash  
Mexico, endemic.  
Wood: Nuevo Leon and Tamaulipas south to Veracruz and Chiapas.
862. *P. virgatum* L.  
U. S. and West Indies south to Argentina, native.  
Swamps: Nayarit, Jalisco, San Luis Potosi and Tamaulipas south to Chiapas and Tabasco.
863. *P. virletii* Fourn.  
Mexico, endemic.  
Brush: Sonora, San Luis Potosi (type loc.) and Veracruz.

## Pennisetum L.

Paniceae

Eighty species, tropics and subtropics, worldwide.

864. *P. americanum* (L.) Schum.  
Introduced and cultivated.  
Reported from Nuevo Leon and Mexico.
865. *P. bambusiforme* (Fourn.) Hensl.  
Mexico and Central America south to Peru, native.  
Dry banks: San Luis Potosi, Michoacan, Veracruz (type loc.), Hidalgo, Oaxaca and Chiapas.



866. P. clandestinum Host.  
Introduced.  
Commonly cultivated: Throughout Mexico.
867. P. complanatum (Nees) Hemsl.  
Mexico and Central America, native.  
Pine-oak forests: Sinaloa, south to the Yucatan Peninsula.
868. P. crinitum (HBK) Spreng.  
Mexico, endemic.  
Brush: Sinaloa, Durango, San Luis Potosi, Nayarit, Jalisco, Guanajuato, Michoacan, Mexico, Veracruz and Guerrero.
869. P. distachyum (Fourn.) Rupr.  
Guerrero, Puebla, Mexico and Central America, native.  
Veracruz and Oaxaca.
870. P. durum Beal  
(including P. pringlei Leeke)  
Mexico, endemic.  
Chihuahua.
871. P. nervosum (Nees) Trin.  
Mexico, Guatemala, Ecuador and Brazil to Argentina,  
native.  
San Luis Potosi, Veracruz and Chiapas.
872. P. orientale Rich.  
Introduced, cultivated, gardens, throughout Mexico.
873. Pennisetum prolificum Chase  
Mexico, endemic.  
Tropical forest margin: Veracruz (type loc.),  
Guerrero and Oaxaca.
874. P. purpureum Schum.  
Introduced.  
Cultivated and escaped: Nuevo Leon south to Chiapas  
and Tabasco.
875. P. setosum (Sw.) L. Rich.  
U.S., West Indies and Mexico south to Bolivia and  
Brazil, native.  
Pine woods: Sinaloa south to Chiapas; Tamaulipas,  
Veracruz, Mexico.
876. P. villosum R. Br.  
Introduced.  
Cultivated: Sinaloa, Durango, Coahuila, Nuevo Leon,  
Zacatecas, Aguascalientes, Jalisco, Mexico, Tamaulipas  
Chiapas.

## PENTARRHAPHIS HBK

## Chlorideae

Two species in Mexico and Central America.

877. Pantarraphis fourmieri Vasey  
Mexico, native, endemic.  
Jalisco, Guerrero, Oaxaca, Mexico, Morelos.
878. P. polymorpha (Fourn.) Griffiths  
Mexico, endemic.  
Rocky places: Sinaloa and Durango south to Oaxaca.
879. P. scabra HBK  
Mexico, Central America, Colombia, native.  
Rocky slopes: Querétaro (type loc.), Oaxaca,  
Chiapas and Tabasco.

## PERILLEMA Presl

## Eragrosteae

Three species, Mexico, Central America and northern South America.

880. *P. ciliatum* Fourn.

Mexico, endemic.

Shady banks: Sinaloa, Jalisco, Guanajuato, Mexico, Morelos, Veracruz (type loc.) and Chiapas.

881. *P. crinitum* Presl

Mexico and Central America south to Colombia, Ecuador and Brazil, native.

Shady banks: Baja California Sur, Sonora, Chihuahua south to Chiapas.

## PEYRITSCHIA Fourn.

## Aveneae

Monotypic.

882. *P. koelerioides* Fourn.

Mexico, endemic.

Dry slopes: Durango, Guanajuato, Michoacán, México (type loc.), Morelos, Hidalgo, Puebla and Oaxaca.

883. *Peyritschia pringlei* (Scribn.) Koch

Mexico & Central America.

Sierra Madre: Sonora and Chihuahua south to Puebla.

## PHALARIS L.

## Phalarideae

Twenty species, mostly northern hemisphere, subtemperate.

884. *Phalaris angusta* Nees

Savanna areas of North and South America.

Reported for Baja California Norte.

885. *Phalaris aquatica* L.

Introduced, cultivated.

Forage trials at experiment stations, e.g. Chihuahua.

886. *P. arundinacea* L.

Introduced.

Cultivated: reported in Chihuahua; Baja California Norte.

887. *P. canariensis* L.

Introduced.

Cultivated and escaped: scattered localities throughout Mexico except for Baja California and Yucatan Peninsula.

888. *P. caroliniana* Walt.

U. S. and northern Mexico, native.

Ditches: Baja California Norte, Sonora, Chihuahua and Coahuila.

889. *P. minor* Retz.

Introduced.

Weedy: reported for Baja California Norte, Sonora, Hidalgo and Mexico.

## PHARUS L.

## Olyreae

Eight species in the American tropics.

890. *P. glaber* HBK

Mexico and West Indies south to northern Argentina, native.

Tropical woods: Chiapas and Tabasco.

891. P. latifolius L.  
Mexico to Peru and Brazil, native.  
Moist woods: San Luis Potosi, Mexico, Oaxaca and Veracruz.
892. P. mezii Prodoche  
Mexico and West Indies to Brazil, native.  
Tropical woods: Veracruz, Michoacan, Guerrero.

- PHLEUM L. Aveneae  
Four species, temperate regions of the world.
893. P. alpinum L.  
Circumboreal and high mountains of the southern hemisphere, native.  
Mountain grasslands: Nuevo Leon, Mexico and Puebla, Veracruz (Orizaba)

- PHRAGMITES Adans. Arundineae  
Three species, worldwide.
894. P. australis (Cv.) Trin.  
Worldwide.  
Scattered localities throughout Mexico.

- PHYLLOSTACHYS Sieb. Bambuseae  
Old World.
895. P. aurea A. & C. Riviere  
Introduced.  
Commonly cultivated: scattered localities throughout Mexico.

- PIPTOCHAETIUM Presl Stipeae  
Ten species, Mexico and Central and South America.
896. P. brevicalyx (Fourn.) Ricker  
Mexico, endemic.  
Pine woods: San Luis Potosi, Hidalgo, Mexico, Tlaxcala and Veracruz.
897. P. fimbriatum (HBK) Hitchc.  
U. S., Mexico and Guatemala, native.  
Pine woods: throughout Mexico except Tabasco and the Yucatan Peninsula.
898. Piptochaetium leianthum (Hitchc.) Beetle  
Mexico, endemic.  
Mountain grassland, Coahuila (type loc.), Nuevo Leon, Tamaulipas and Puebla.
899. Piptochaetium mexicanum (Hitchc.) Beetle  
Mexico, endemic.  
Central mountains: Mexico and Hidalgo, Puebla.
900. Piptochaetium pringlei (Beal) Parodi  
U.S. and Mexico, native.  
Rocky slopes, northern border states south to Oaxaca
901. P. stipoides (Trin. & Rupr.) Hack.  
Mexico and South America, native.  
Pine woods: Nuevo Leon, Tamaulipas, San Luis Potosi, Jalisco & Guanajuato.
902. Piptochaetium virescens (HBK) Parodi  
Mexico and Guatemala, native.  
Pine woods: Coahuila, Nuevo Leon south to Chianas.
- 902a. Piptochaetium virescens var. arseni (Hack.) Beetle  
Mexico, endemic.  
Described from Michoacan.

## POA L.

## Festúcea

- One hundred fifty species, temperate regions, worldwide.
903. P. albescens Hitchc.  
Mexico, endemic.  
Mountains: Chihuahua (type locality).
904. P. annua L.  
Introduced.  
Weedy: common throughout Mexico except for Tabasco and the Yucatan peninsula.
905. P. bigelovii Vasey and Scribn.  
U. S. and Mexico, native.  
Ditches: Baja California Norte, Baja California Sur, Sonora, Chihuahua, Coahuila and Nuevo Leon.
906. Poa coahuilensis Beetle  
Mexico, endemic.  
Dry slopes: Coahuila (type loc.)
907. P. conglomerata Rupr.  
Mexico, endemic.  
Central mountains: Mexico, Puebla and Veracruz
908. P. fendleriana (Steud.) Vasey  
U. S. and Mexico, native.  
Dry slopes: Sonora, Chihuahua, Coahuila
909. P. griffithsii Hitchc.  
Mexico, endemic.  
Dry slopes: Sonora (type loc.).
910. P. longiligula Scribn. & Williams  
U. S. and Mexico.  
Dry slopes: Baja California Norte.
911. P. orcuttiana Vasey  
California and Mexico, native.  
Dry slopes: Baja California Norte, Baja California Sur.
912. P. orizabensis Hitchc.  
Mexico, endemic.  
Central mountains: Nuevo Leon, Puebla and Mexico; Chiapas.
913. P. pratensis L.  
Introduced.  
Cultivated: Northern, border States, also Mexico and Veracruz.
914. P. ruprechtii Rupr.  
Mexico, endemic  
Coahuila, Nuevo Leon, Tamaulipas and Mexico (type loc.).
915. P. scabrella (Thurb.) Benth.  
U. S. and Mexico, native.  
Dry woods: Baja California Norte.
916. P. seleri Pilger  
Mexico and Guatemala, native.  
Mountain: Oaxaca, Chiapas.
917. P. sharovii Swallen  
Mexico, endemic.  
Shary soil: Veracruz, S.L.P. Mexico, Chiapas.
918. P. strictiramea Hitchc.  
Mexico, endemic.  
Ledges: Chihuahua (type loc.).

919. Poa tacanae Swallen  
Mexico, and Guatemala.  
Reported from Chiapas.
920. P. villaroeli Phil.  
Mexico and Chile, native.  
Mountains: Mexico and Puebla.

## POLYPOGON Desf.

## Aveneae

- Ten species, temperate, worldwide.
921. Polypogon australis Brongn.  
Introduced from Argentina and Chile.  
Reported from Baja California Norte.
922. P. elongatus HBK.  
Mexico to Argentina, native.  
Ditches: Scattered localities throughout Mexico  
except for Baja California and Yucatan Peninsula.
923. P. interruptus HBK.  
Canada south to Argentina, native.  
Ditches: Baja California Norte, Baja California Sur,  
Nuevo Leon and the central montains.
924. P. maritimus L.  
Introduced.  
Ditches: Baja California Norte and Sonora.
925. P. monspeliensis (L.) Desf.  
Introduced.  
Ditches: Baja California Norte to Coahuila; Puebla,  
Jalisco.

## PRINGLEOCHLOA Scribn.

## Chlorideae

- Monotypic.
926. P. stolonifera (Fourn.) Scribn.  
Mexico, endemic.  
Known only from Puebla.

## PSEUDECHINOALAENA Stapf

## Paniceae

- Monotypic.
927. P. polystachya (HBK) Stapf  
Mexico to Paraguay; tropical Africa.  
Weedy: Querrero, Mexico, Hidalgo, Puebla, Oaxaca,  
Veracruz, Chiapas and Tabasco.
928. Raddia strictiflora (Fourn.) Chase  
Mexico, endemic.  
Described from "Arroyo Sellero"

## REEDEROCHLOA Soderstrom and Decker

## Aeluropodeae

- Monotypic.
929. R. eludens Soderstrom and Decker  
Mexico, endemic.  
Inland salt flats: Durango (type loc.) and San Luis  
Potosi.

## REIMAROCHLOA Hitchc.

## Paniceae

- Four species in the American tropics.
930. R. oligostachya (Munro) Hitchc.  
Florida, Cuba and Mexico, native.  
Ditches: Colima and Tabasco.

- RHIPIDOCCLADUM** McClure Bambuseae  
 Eleven species in the American tropics.
931. Rhipidocladum bartlettii McClure  
 Mexico and Guatemala and Honduras.  
 Reported from Chiapas.
932. R. pittieri (Hackel) McClure  
 Mexico and Guatemala, native.  
 Tropical wood margins: Chiapas and Campeche.
933. Rhipidocladum racemiflorum (Fourn.) McClure  
 Mexico and Central America.  
 Reported from Sinaloa, Durango, Tamaulipas,  
 Nayarit, Oaxaca, Michoacan, and Veracruz.
- RHYNCHELYTRUM** Nees Paniceae  
 About 35 species, mostly African.
934. R. repens (Willd.) C. E. Hubb.  
 Introduced.  
 Common roadside weed throughout Mexico.
935. Rottboellia exaltata L.f.  
 Introduced from tropical Asia.  
 Reported for Campeche.
- SACCHARUM** L. Andropogoneae  
 About 10 species in the Old World tropics.
936. S. officinarum L.  
 Introduced.  
 Cultivated in moist lowland areas.
- SACCIOLEPIS** Nash Paniceae  
 Thirty species, tropical, worldwide.
937. S. myuros (Lam.) Chase  
 Mexico and Cuba south to Brazil, native.  
 Marshes: Nayarit, Jalisco, Veracruz, Mexico,  
 Oaxaca and Chiapas.
938. Sacciolepis striata (L.) Nash  
 Southeastern U.S. and Mexico.  
 Reported from Tabasco.
- SCHAFFNERA** Nash Chlorideae  
 Monotypic.
939. S. gracilis Benth  
 Mexico, endemic.  
 San Luis Potosi (type loc.).
940. Schismus arabicus Nees  
 Introduced  
 Weedy, Baja California Norte and Sonora.
941. S. barbatus (L.) Thell.  
 Introduced.  
 Weedy: Baja California Norte and Sonora.
- SCLEROPOGON** Phil. Eragrostaeae  
 Monotypic.
942. S. brevifolius Phil.  
 Mexico; also Chile and Argentina, native.  
 Dry flats: San Luis Potosi south to Puebla.

943. Scleropogon longisetus Beetle  
United States and northern Mexico.  
Northern border states south to Guanajuato.
- SECALE L. Hordeae  
Five species in temperate Europe and Asia.
944. S. cereale L.  
Introduced.  
Occasionally cultivated: Nuevo Leon, Mexico, Tlaxcala.
- SETARIA Beauv. Paniceae  
One hundred species, both temperate and tropical,  
worldwide.
945. Setaria anceps Stapf  
Introduced from Africa  
Reported for Tabasco and Yucatan.
946. Setaria arizonica Pominen  
Southwestern U.S. (Arizona) and  
Reported from Sonora
947. S. (Panicum) chapmani (Vasey) Pilger  
U. S., Bahamas and Mexico, native.  
Coastal sand: Yucatan.
948. S. geniculata (Lam.) Beauv.  
Subtropics, worldwide, native.  
Weedy: common throughout Mexico.
949. S. grisebachii Fourn.  
U. S. and Mexico, native.  
Weedy: common throughout Mexico.
- 949a. S. grisebachii Fourn. var. yucatan (Herm.) Romingen
950. S. latifolia (Scribn.) Herm.  
Mexico, endemic.  
Brush: Durango (type loc.) Jalisco.
951. S. leucopila (Scribn. & Merr.) K. Schum.  
U. S. and Mexico, native.  
Banks: northern border states (type loc.: Coahuila)  
south to Puebla.
952. S. Liebmannii Fourn.  
U. S. and Central America, native.  
Weedy: Baja California Sur, Sonora and Chihuahua south to  
Chiaras.
953. S. longipila Fourn.  
Mexico and Central America, native.  
Woods: Nayarit, Durango, Jalisco, Colima and Guanajuato
954. S. lutescens (Wieg.) Hubb.  
Introduced.  
Reported throughout Mexico
955. S. macrosperma (Scribn. & Merr.) Schum.  
U. S., Bahamas and northern Mexico, native.  
Moist banks: Tamaulipas, Nuevo Leon and Durango.
956. S. macrostachya HBK  
U. S. and Mexico, native.  
Moist banks: throughout Mexico (except Baja California Norte  
and the Yucatan Peninsula).
957. S. magna Griseb.  
U.S., Mexico, Caribbean and Costa Rica, native.  
Coastal: Yucatan.

958. S. palmeri Henrard  
Mexico, endemic.  
Desert brush: Baja California Sur.
959. S. palmifolia (Koen.) Stanf  
Introduced.  
Cultivated: Sonora and Baja California Sur.
960. S. paniculifera (Steud.) Fourn.  
West Indies and southern Mexico to Colombia, native.  
Pine woods: San Luis Potosi, Veracruz, Puebla, Oaxaca,  
Chiapas and Tabasco.
961. S. poiretiana (Schultes) Kunth  
Mexico, Brazil, Peru and Bolivia, native.  
Moist banks: Tamaulipas, San Luis Potosi, Hidalgo, Puebla,  
Veracruz, Oaxaca and Chiapas.
962. S. ramiseta (Scribn.) Pilger  
U. S. and Mexico, native.  
Brush: Tamaulipas, Nuevo Leon and Coahuila.
963. S. rariflora Mikan  
Mexico and West Indies to Brazil, native.  
Tamaulipas.
964. S. scandens Schrad.  
Mexico and Central America south to Argentina, native.  
Wet banks: Mexico, Oaxaca, Veracruz, Chiapas,  
Campeche and Yucatan.
965. S. scheelei (Steud.) Hitchc.  
U. S. and Mexico, native.  
Chihuahua to Tamaulipas and south to Michoacan, Hidalgo  
and Veracruz.
966. S. setosa (Sw.) Beauv.  
Introduced?  
Reported only from Nuevo Leon.
967. Setaria sphacelata (Schum.) Stapf  
Introduced.  
Reported: Tabasco & Jalisco.
968. S. tenax (L. Rich.) Desv.  
Mexico and West Indies, Central America south to  
Argentina, native.  
Pine woods: Nuevo Leon, San Luis Potosi, Jalisco,  
south to Yucatan.
- 968a. S. tenax var. antrorsa Pomingen  
Mexico, endemic.  
Brush: Yucatan (type loc.) and Veracruz.
969. S. texana Emery  
Texas and Mexico, native.  
Shady banks: Tamaulipas and Nuevo Leon.
970. Setaria variifolium (Swallen)  
Mexico, endemic.  
Yucatan (type loc.) and Quintana roo.
971. S. verticillata (L.) Beauv.  
Introduced.  
Common throughout.
972. S. villosissima (Scribn. & Merr.) K. Schum.  
Southwestern U. S. and adj. Mexico, native.  
Igneous rocks: Sonora, Coahuila, Nuevo Leon and  
Tamaulipas.



973. S. viridis (L.) Beauv.

Introduced?

Reported from Sonora, Chihuahua, San Luis Potosi and Veracruz.

974. S. vulpiseta (Lam.) R. & S.

Mexico and Caribbean to South America, native.

Reported from San Luis Potosi, Veracruz, Oaxaca, Chiapas and Yucatan.

#### SETARIOPSIS Scribn.

Paniceae

Two species in Mexico and northern South America.

975. S. auriculata (Fourn.) Scribn.

Mexico and Central America, Colombia and Venezuela, native.

Grassy plains: Sonora and Chihuahua south to the Yucatan Peninsula.

- 975a. S. latiglumis (Vasey) Scribn.

Mexico, endemic.

Chihuahua (type loc.) south to Chiapas.

- 975b. S. auriculata var. depauperata (Fourn.) Beetle

#### SITANION Raf.

Hordeae

Six species in North America.

976. S. longifolium J. G. Smith

U. S. and Mexico, native.

Deserts and mountains: northern border states south to Puebla.

977. Soderstromia mexicana (Scribn.)

Mexico, endemic.

Ravine: Guerrero.

978. Sohnsia filifolia (Fourn.) Airy-Shaw

Mexico, endemic.

Brush: San Luis Potosi.

#### SORCHASTRUM Nash

Andropogoneae

Fifteen species, temperate and tropical America and Africa.

979. Sorghastrum albescens (Fourn.) Beetle

Mexico, endemic.

Reported from Veracruz, Nayarit, Jalisco, Morelos and Chiapas.

980. S. brunneum Swallen

Mexico and Guatemala, native.

Oak woods: Jalisco, Hidalgo, Guerrero, Oaxaca and Chiapas.

981. Sorghstrum elliottii (Mohr) Nash

U. S. Mexico, native.

Reported from Nayarit and Jalisco.

982. S. galeotii Fourn.

Mexico, endemic.

Reported only from Jalisco, Mexico, Veracruz and Chiapas.

983. S. incompletum (Presl) Nash

Mexico to Colombia and Venezuela; tropical Africa, native.

Pine woods: Nayarit south to Oaxaca.

984. S. nudipes Nash

Mexico, endemic.

Pine woods: Chihuahua (type loc.) and Sonora.

985. *S. nutans* (L.) Nash  
Canada south to Mexico; South America, native.  
Grassy slopes: northern border states south to Chiapas.
986. *S. setosum* (Griseb.) Hitch.  
Tamaulipas, S. L. S., Veracruz, Oaxaca, Chiapas, and Tabasco.

## SORGHUM Moench.

## Andropogoneae

987. Thirty-five species, mostly African.  
*S. alnum* Parodi. Introduced.  
Cultivated in Sonora, Chihuahua, Coahuila, Nuevo Leon, Jalisco and Colima.
988. *S. bicolor* (L.) Moench. Introduced.  
Cultivated throughout Mexico
989. *S. halepense* (L.) Pers. Introduced.  
Common weed throughout Mexico.
990. *S. sudanense* (Piper) Stapf  
Introduced, cultivated.
991. *S. trichocladum* (Rupr.) Kuntze  
native, Mexico and Central America.  
Oak forests: Sinaloa south to Oaxaca (type loc.)

## SPARTINA

## Chlorideae

992. About 16 species, mostly American.  
*S. cynosuroides* (L.) Roth.  
U. S. and Mexico, native.  
Atlantic coastal marshes: reported onyl from Tamaulipas.
993. *S. foliosa* Trin.  
U. S. and Mexico, native.  
Pacific coastal marshes: Baja Norte and Baja Sur.
994. *S. junciformis* Engelman  
U. S., Mexico, Central America south to Argentina, native.  
Coastal and inland marshes: Coahuila, Nuevo Leon and Tamaulipas south to the Yucatan Peninsula.
995. *S. patens* (Ait.) Muhl.  
U. S., West Indies and Mexico, native.  
Atlantic coastal marshes: Tamaulipas, Veracruz, Tabasco, Campeche and Quintana Roo.

## SPHENOPHOLIS Scribn.

## Aveneae

- Five species in North America.
996. *S. obtusata* (Michx.) Scribn.  
Alaska and Hudson Bay south to Mexico, native.  
Moist places: northern border states south to Oaxaca.
997. *S. airoides* (Torr.) Torr. var. *airoides*  
U. S. and Mexico, native.  
Alkali flats: northern border states south to Durango and San Luis Potosi.
- 997a. *S. airoides* var. *minor* (Vasey) Beetle  
U. S. and Mexico, native.  
Alkali flats: northern border states south as far as Mexico and Hidalgo.
998. *S. asper* (Michx.) Kunth  
U. S. and Mexico, native.

998. Sporobolus asper (Michx.) Kunth  
U. S. and Mexico, native.  
Reported for Coahuila
999. Sporobolus asperifolia Nees & Mey  
Bicentric, Canada, U.S. and Mexico; also southern  
Argentina, native.  
Moist flats: Baja California Norte, Chihuahua, Coahuila,  
Durango and San Luis Potosi.
1000. S. atrovirens Kunth  
Mexico, endemic.  
Baja California Sur, Durango to Tamaulipas and south to the Yucatan  
Peninsula.
1001. S. buckleyi Vasey  
U. S. and Mexico; British Honduras, native.  
Shady flats: Nuevo Leon and Tamaulipas south to the  
Yucatan Peninsula.
1002. Sporobolus coahuilensis Valdez  
Mexico, endemic.  
Described from Coahuila.
1003. S. contractus Hitchc.  
U. S. and Mexico, native.  
Gravel slopes: Baja California Norte, Sonora, Chihuahua,  
Coahuila and San Luis Potosi.
1004. S. cryptandrus (Torr.) A. Gray  
U. S. and Mexico, native.  
Sandy soils: northern border states and Baja California Sur.
1005. S. cubensis Hitchc.  
Mexico, West Indies; Central America south to Bolivia, native.  
Oaxaca, Chiapas, Veracruz and Tabasco.
1006. S. domingensis (Trin.) Kunth  
Florida, Caribbean and Mexico, native.  
Beaches: Yucatan and Quintana Roo.
1007. Sporobolus erectus Hitchc.  
Mexico, endemic.  
Reported from Veracruz (type loc.) and Chiapas.
1008. S. flexuosus (Thurb.) Rydb.  
U. S. and northern Mexico, native.  
Mesas: Northern border states.
1009. S. giganteus Nash  
U. S. and Mexico, native.  
Mesas: Chihuahua and Coahuila.
1010. Sporobolus hintoni Hartley  
Mexico, endemic.  
Described from the State of Mexico.
1011. S. indicus (L.) R. Br.  
Mexico and West Indies to Colombia and Brazil, native.  
Sandy pine uplands: throughout Mexico.
1012. S. jacquemontii  
Mexico, endemic.
1013. S. junceus (Michx.) Kunth  
U. S. and Mexico, native.  
Pine barrens: Veracruz and Chiapas.
1014. S. macrosperrus Scribn.  
Mexico and Guatemala, native.  
Pine-oak: forests: Sinaloa, Nayarit, Zacatecas, Jalisco  
(type loc.) south to Chiapas.

1015. S. nealleyi Vasey  
U. S. and Mexico, native  
Gypsophilous soils: Coahuila, Nuevo Leon and San Luis Potosi.
1016. S. palmeri Scribn.  
Mexico, endemic.  
Alkaline soils: Durango, Coahuila and San Luis Potosi.
1017. S. patens Swallen  
U. S. and Mexico, native.  
Known only from Sonora.
1018. S. pulvinatus Swallen  
U. S. and Mexico, native.  
Wet gravels: northern border states south to Oaxaca.
1019. S. purpurascens (Sw.) Hamilt.  
U. S., West Indies, Mexico; Central America south to Peru, native.  
Salt Flats: Revillagigedo Islands, Tamaulipas, Veracruz, Oaxaca and Chiapas.
1020. S. pyramidatus (Lam.) Hitchc.  
U. S., West Indies, Mexico; Central America south to Argentina, native.  
Salt flats: common throughout Mexico.
1021. S. regis I.M. Johnston  
Mexico, endemic.  
Salt flats: known only from Coahuila.
1022. S. spiciformis Swallen  
Mexico, endemic.  
Known only from Coahuila.
1023. Sporobolus tenuissimus (Schränk) Kuntze  
Mexico, Virgin Islands and Brazil.  
Reported from Michoacan.
1024. Sporobolus tharpianus Hitchc.  
Texas and adjacent Mexico, native.  
Reported only for Tamaulipas.
1025. S. trichodes Hitchc.  
Mexico, endemic.  
Chihuahua, Zacatecas, Aguascalientes, Guanajuato, Jalisco (type loc.), Michoacan, Guerrero, Mexico, Morelos and Veracruz.
1027. S. virginicus (L.) Kunth var. virginicus  
Tropical and subtropical coasts, worldwide.  
Coastal dunes and flats: Baja California, Sonora; Tamaulipas south to the Yucatan Peninsula.
- 1027a. S. virginicus var. major Drege

**STENOTAPHRUM** Trin.

## Paniceae

- Seven species, tropical and subtropical, worldwide.
1028. S. secundatum (Walt.) Ktze.  
Tropics and subtropics, worldwide, native.  
Commonly cultivated throughout Mexico.

- STIPA L. Stipeae  
 One hundred fifty species, temperate, worldwide.
1029. S. acuta Swallen  
 México, endemic.  
 Rocky soils: Carneras Pass, Coahuila.
1030. S. alta Swallen  
 México, endemic.  
 Desert shrub: known only from Coahuila.
1031. S. bracteata Swallen  
 México, endemic.  
 Known only from Baja California Norte.
1032. S. clandestina Hack.  
 México, endemic.  
 Coahuila and Nuevo León, San Luis Potosí, Zacatecas, Aguascalientes, Michoacán, Guanajuato and México.
1033. S. constricta Hitchc.  
 México, endemic.  
 Rocky slopes: Hidalgo (type loc.), Nuevo León and Tamaulipas south to Oaxaca, Veracruz and México.
- 1034a S. coronata Thurb. var. coronata  
 U.S. and México, native.  
 Rocky slopes: Reported only from Baja California Norte.
- 1034b S. coronata var. depauperata (Jones) Hitchc.  
 U.S. and México.  
 Reported from Baja California Norte.
1035. S. diegoensis Swallen  
 U.S. and México, native.  
 Rocky slopes: Reported only from Baja California Norte.
1036. S. editorum Fourn.  
 México, endemic.  
 Rocky slopes: Coahuila, Nuevo León and Tamaulipas. South to Puebla.
1037. S. eminens Cav.  
 U.S. and México, native.  
 Rocky slopes: Northern border states, south to Oaxaca.
1038. S. ichu (Ruiz & Pav.) Kunth  
 México south to Argentina, native.  
 Rocky slopes: Coahuila, San Luis Potosí south to Chiapas.
1039. S. lepida Hitchc.  
 U.S. and México, native.  
 Rocky slopes: reported only from Baja California Norte.
- 1039a S. lepida var. andersonii Vasey
1040. S. leucotricha Trin. & Rupr.  
 U.S. and México, native.  
 Grassland: Coahuila, Nuevo León and Tamaulipas south to Oaxaca.
1041. S. linearifolia Fourn.  
 México and Guatemala, native.  
 Central mountains: type from México "nrope Tacubaya"
1042. S. linearis Swallen  
 México, endemic.  
 Rocky slopes: known only from Nuevo León.
1043. S. lobata Swallen  
 U.S. and México, native.  
 Reported from Coahuila and Chihuahua.

1044. *S. mucronata* HBK  
Mexico south to Argentina and Chile, native.  
Mountains: Chihuahua, Coahuila and Nuevo Leon south to Chiapas.
1045. *S. multinodis* Scribn.  
Mexico, endemic.  
Mountains: Chihuahua, Coahuila and Nuevo Leon south to Puebla.
1046. *S. neomexicana* (Thurb.) Scribn.  
U. S. and Mexico, native.  
Sonora, Chihuahua, Coahuila, Nuevo Leon and San Luis Potosi.
- 1047a. *S. pulchra* Hitchc. var. *pulchra*  
U. S. and Mexico, native.  
Dry slopes: reported only for Baja California Norte.
- 1047b. *Stipa pulchra* Hitchc. var. *cernua* (Stebbins & Love)  
Beetle and Tofsrud  
U. S. and Mexico, native.  
Reported from Baja California Norte.
- 1040a. *S. robusta* (Vasey) Scribn.  
U. S. and Mexico, native.  
Rocky slopes: Coahuila, Nuevo Leon and Tamaulipas.
- 1040b. *S. saxicola* Hitchc.  
Mexico, native, endemic. Described from Puebla.
1049. *S. speciosa* Trin. & Rupr.  
U. S. and Mexico, southern South America, native.  
Rocky slopes: reported only from Baja California Norte.
1050. *S. tenuissima* Trin.  
Mexico; also Chile and Argentina, native.  
Rocky slopes: Coahuila, Nuevo Leon, San Luis Potosi, Guanajuato, Veracruz, Puebla and Oaxaca.
1051. *S. virletti* Fourn.  
Mexico, endemic.  
Known only from San Luis Potosi.

## STIPORYZOPSIS Johnson

## Stipeae

Two or three species in North America.

1052. *S. bloomeri* (Bol.) Johnson  
Introduced.  
Cultivated: reported only from Coahuila.

## STREPTOCHAETA Schrad.

## Olyreae

Two species in tropical America.

1053. *S. sodiroana* Hack.  
Mexico south to Ecuador, native.  
Tropical forest: reported only from Chiapas.
1054. *S. spicata* Schrad.  
Mexico south to Brazil, native.  
Tropical forest: Veracruz and Chiapas.

## STREPTOGYNE Beauv.

## Streptogyneae

One species in the American tropics

1055. *S. americana* Hubb.  
Mexico and Trinidad south to Brazil, native.  
Tropical woods: Veracruz and Chiapas.

## THRASYA HBK

## Paniceae

Twenty species in the American tropics

1056. T. campylostachya (Hack.) Chase  
Mexico south to Bolivia, native.  
Pine forestes: Veracruz, Oaxaca and Chiapas.

## TRACHYPOGON Nees

## Andropogoneae

Fifteen species in American tropics.

1057. T. gouini Fourn.  
Mexico, endemic (introduced in Cuba).  
Veracruz (type loc.).
1058. T. karwinskyi (Hack.) Nash  
Mexico, endemic.  
known only from the type locality: "Mexico"
1059. T. montufari (HBK) Nees  
Mexico and Ecuador, native.  
Zacatecas and San Luis Potosi south to Chiapas.
1060. T. palmeri Nash  
Mexico, endemic.  
Known only from Jalisco.
1061. T. plumosus (H.&B.) Nees  
U. S. south to tropical South America, native.  
Reported only from Veracruz.
1062. T. secundus (Presl) Scribn.  
U. S. and Mexico south to Argentina, native.  
Baja California Norte, Sonora and Chihuahua south  
to Chiapas and Tabasco.
1063. Trachypogon stenophyllus (R. & S.) Hitchc.  
Mexico and Central America, native.  
Grasslands: San Luis Potosi, Veracruz, Oaxaca,  
Chiapas, Tabasco and Campeche.

## TRAGUS Hall

## Zovsieae

Three species in tropics and subtropics. worldwide.

1064. T. berteronianus Schult.  
Introduced.  
Northern border states south to Oaxaca.
1065. Trichoneura elegans Swallen  
Southern Texas and northern Mexico, native.  
Reported for northern Tamaulipas.

## TRIDENS R. &amp; S.

## ERAGROSTEAE

Sixteen North American species.

1066. T. albescens (Vasey) Woot. & Standl.  
U. S. and Mexico, native.  
Swales: Chihuahua, Coahuila, Nuevo Leon and  
Tamaulipas.
1067. T. eragrostoides (Vasey & Scribn.) Nash  
U. S., Cuba and Mexico, native.  
Swales: Nuevo Leon, Oaxaca and Yucatan.
1068. T. flavus (L.) Hitchc.  
U. S. and Mexico, native.  
Swales: reported only for Nuevo Leon.

1069. *T. muticus* (Torr.) Nash  
 U. S. and Mexico, native.  
 Swales: northern border states south to Durango,  
 Zacatecas and San Luis Potosi.
1070. *T. texanus* (S. Wats.) Nash  
 U.S. and Mexico, native.  
 Swales: Coahuila, Nuevo Leon, Tamaulipas and  
 San Luis Potosi.

## TRINIOCHLOA Hitchc.

## Aveneae

- Three American species.
1071. *T. laxa* Hitchc.  
 Ravine: reported only for Chihuahua.
1072. *T. micrantha* (Scribn.) Hitchc.  
 Mexico, endemic.  
 Reported only for Mexico and Morelos (type loc.),  
 native.
1073. *T. stipoides* (HBK) Hitchc.  
 Mexico south to Bolivia, native  
 Pine woods: San Luis Potosi south to Chiapas.
1074. *Triplasis caribensis* (Pohl) Beetle  
 Mexico and Honduras.  
 Sandy beach, Tabasco.

## TRIPOGON Roth

## Eragrostae

1075. *T. spicatus* (Nees) Ekman  
 U. S., Cuba, Mexico and South America, native.  
 Dry banks: Durango, Aguascalientes, San Luis Potosi  
 and Veracruz.

## TRIPSACUM L.

## Andropogoneae

- Nine species in the Americas.
1076. *Tripsacum bravum* Gray  
 Mexico, native, endemic.  
 Mexico (Type collection) and Jalisco.
1077. *T. dactyloides* (L.) L.  
 U. S., West Indies and Mexico, native.  
 Grasslands: Coahuila and Nuevo Leon south to Guerrero.
1078. *Tripsacum fasciculatum* Trim.  
 Mexico, West Indies, Central and South America,  
 native.  
 Barrancas, especially near cultivated plots,  
 Nayarit, Jalisco, Veracruz, Guerrero, Oaxaca  
 and Chiapas.
- 1078a. *Tripsacum floridanum* Porter and Vasey  
 Mexico and Florida, native.  
 Pine woods Tamaulipas
1079. *T. lanceolatum* Rupr.  
 Mexico, Honduras and Panama, native.  
 Pine woods: common throughout Mexico.
1080. *T. maizar* Hernandez X and Randolph  
 Mexico, endemic.  
 Reported only for San Luis Potosi.
1081. *T. pilosum* Scribn. and Merr.  
 Mexico, endemic.  
 Forest margin: Chihuahua south to Chiapas.



1082. Tripsacum zopilatanse Hernand. and Rand.  
Mexico, native, endemic.  
Reported from Michoacan and Guerrero.

## TRISETUM Pers.

## Aveneae

Seventy-five species in temperate regions, worldwide.

1083. T. deveuxioides (HBK) Kunth  
Mexico and Central America south to Ecuador, native.  
Mountain meadows: Chihuahua and Nuevo Leon south to Chianas.
- 1083a. T. deveuxiostis var. rubescens Scribn.  
Mexico, endemic.  
Nuevo Leon, San Luis Potosi, Jalisco, Michoacan, Mexico, Guerrero and Veracruz.
1084. T. filifolium Scribn.  
Mexico, endemic.  
Pine, oak woods: Chihuahua (type loc.) and Durango.
1085. T. interruntum Fourn.  
U. S. and Mexico, native.  
Reported for Baja Norte (Type loc. for T. californicum).
1086. T. irazuense (Kuntze) Hitchc.  
Mexico and Central America south to Ecuador, native.  
Pine woods: San Luis Potosi south to Chianas.
1087. Trisetum mexicanum (Swallen) Koch.  
Mexico, native, endemic.  
Described from State y Mexico
1088. T. palmeri Hitchc.  
Mexico, endemic.  
Sonora, Coahuila, Sinaloa, Durango (type loc.) and Jalisco.
1089. T. pringlei (Scribn) Hitchc.  
Mexico south to Panama, native.  
Meadows: Oaxaca? (type loc.) and Chianas.
1090. T. rosei Scribn. and Merr.  
Mexico and Guatemala, native.  
Mountains: Hidalgo, Mexico, Puebla and Chianas.
1091. T. spicatum (L.) Richt.  
Arctic-alpine and south in the mountains, native.  
Mountains: Coahuila and Nuevo Leon south to Puebla.
1092. T. viride (HBK) Kunth.  
Mexico, endemic.  
Mountains: Queretaro (Type loc.), Mexico and Oaxaca.
1093. T. virletii Fourn. "Mexico, endemic"  
Mountains: Nuevo Leon, San Luis Potosi (type loc.), Michoacan, Guerrero, Mexico, Morelos, Puebla and Veracruz.

## TRISTACHYA Nees

## AVENEAE

Five species in Mexico and South America

1094. T. angustifolia Hitchc.  
Mexico, endemic.  
Known only from Nayarit.
1095. T. avenacea (Presl) Scribn. & Merr.  
Mexico and Guatemala, south to Brazil, native.  
Forest margin: Jalisco, Michoacan, Mexico, Oaxaca and Chianas.

1096. T. laxa Scribn. & Merr.  
Mexico, endemic.  
Durango (type loc.) and Sinaloa.
1097. Trystachya papilosa Guzman  
Mexico, native, endemic.  
Described from Nayarit.

## TRITICUM L.

## Hordeae

- Many cultivated types.
1098. T. aestivum L.  
Introduced.  
Commonly cultivated.

## UNIOLA L.

## Centotheceae

- Ten species in the American (cf. Chasmanthium Link)  
U. S. and Mexico, native.  
Reported only for Nuevo Leon
- 1099 U. paniculata L.  
U. S. and Caribbean and Mexico, native.  
Coastal dunes: Tamaulipas, Veracruz, Tabasco and Chiapas.
1100. U. rittieri Hack.  
Mexico and Central America south to Ecuador, native.  
Sea beaches: Baja California, Sonora, Sinaloa, Oaxaca and Chiapas.
1101. Vetiveria zizanioides (L.) Nash  
Introduced from Asia.  
Cultivated and escaped, reported from Chiapas and Quintana Roo.

## VULPIA Gmel.

## Festuceae

- Thirty species, temperate Europe and North and South America.
1102. V. bromoides (L.) Gray  
Introduced.  
Weedy: reported from Mexico and Chiapas.
1103. V. microstachys Munro var. ciliata
- 1103a. V. microstachys Munro var. pauciflora (Beal) Leonard & Gould
1104. V. myuros var. hirsuta Hack.  
Introduced?  
Weedy: Baja California Norte, Sonora and Coahuila.
- 1104a. V. octoflora (Walt.) Rybd.
- ZEA L. Andropogoneae
- One or two American species under cultivation.
1105. Z. mays L.  
Subtropical American, native.  
Commonly cultivated throughout Mexico.
1106. Z. perennis (Hithc.) Reeves and Mangles.  
Mexico, endemic.  
Described from Jalisco.

## ZEUGITES P. Br.

## Eragrosteae

Twelve species in the American tropics.

1107. Z. americana Willd. var. mexicana (Kunth) Urban  
Mexico south to Bolivia, native.  
Tropical forest, S.L.P., Hidalgo, Guerrero, Veracruz  
and Chiapas.
1108. Z. auriculata Tenori  
Mexico, native, endemic.  
Tropical forest or oak woods, Jalisco, Michoacan, Mexico,  
Morelos and Guerrero.
1109. Z. capillaris (Hitchc.) Swallen  
Mexico, endemic.  
Tropical forest; Jalisco and Colima (type loc.).
1110. Z. hackelii Swallen  
Mexico, endemic.  
Tropical forest, Jalisco (type loc.) and Mexico.
1111. Z. latifolia (Fourn.) Hemsl.  
Mexico, endemic.  
Tropical forest; Jalisco, Guerrero, Oaxaca (type loc.)  
and Chiapas.

## ZOYSIA Willd.

5 species, mostly Asian.

1112. Z. matrella (L.) Merr.  
Introduced from Asia.  
Cultivated for lawns; Nayarit.
1113. Z. tenuifolia Willd.  
Introduced from Asia.  
Cultivated for lawns, Baja California Norte.

## ZIZANIOPSIS Doell and Asch.

Three or 4 species in the Americas.

- Z. miliacea Doell and Asch.  
U.S.A. and Mexico, native.  
Aquatic, Veracruz.

## CYPERACEAE TRINITENSES NOVAE

C. D. ADAMS

British Museum (Natural History), London, England

Rhynchospora ierensis C. Adams, sp. nov.

Herba perennis. Rhizoma torulosa breviter ramosa. Culmi plures dense caespitosi 12-40 cm alti filiformes compresso-trigoni costati glabri laevesque. Folia basalia caulinaque scapo fere dimidio breviora 0.5-0.8 mm lata basi plana medio canaliculata apice triquetra necnon scabridiuscula cetera glabra; vaginae truncatae striatae marginibus supernis hyalinis. Inflorescentia e corymbis 2-3-paucis culmo medio supernoque constructa; corymbus terminalis usque ad 2 cm altus et 3.5 cm latus decompositus paulo apertus radiis primariis circa 8 inaequalibus usque ad 2.5 cm longis; radii graciles bracteolis filiformibus vel setaceis basi membranaceis suffulti; corymbi laterales parviores compositi plerumque latiores quam longiores pedunculis filiformibus. Spiculae singulae binatae vel ad 8-10-nim fasciculatae ramorum primariorum extremitates collocatae in anthelae formantes 2-3 mm longae ovoideo-lanceolatae teretes acutae pedicellatae (ubi singulare) vel subsessiles curvatae 2-florae 1-nucigerae; glumae circa 6 imus brevissimae ovatae 1-nervatae muticae vel minute setuloso-mucronatae membranaceae marginibus latis hyalinis infuscatæ striis patentibus rubro-brunneis; stamina 3; stylus profunde 2-fidus. Achenium circa 0.8 mm longum ubique 0.9 mm latum suborbiculare biconvexum breviter stipitatum grosse transverso-rugulosum porcis 4-6 minute verticali-lineolatis et marginibus crassis cinerascens-flavum; rostrum valde depressum circa 0.1 mm altum 0.5 mm latum ad dimidium apicis extendens vix bilobatum minute apiculatum album vel cinerascens; setae nullae.

Trinidad. Erin Savanna, 11.viii.1977, Philcox & Ramcharan 8146 (holotype K; isotype TRIN 23229).

Additional collections:

Erin Savanna, 28.vii.1980, Alkins s.n. (BM, TRIN 24035); Icacos, road to the savanna, 28.ii.1866, Finlay ? (TRIN 1891).

Endemic to south-western Trinidad.

This species is distinguished from R. tenuis Link and R. emaciata (Nees) Boeckeler by the curved spikelets and smaller broader achenes with the beak strongly depressed.

Scleria orchardii C. Adams, sp. nov.

Herba perennis. Rhizoma brevis torulosa. Culmi approximati 70-100 cm alti prope basim 2-4 mm lati erecti triquetri glabri. Folia ad basim elaminata vel laminis redactis; vaginae laxiusculae ad 13 cm longae alis sursum divergentibus ad 4 mm latis marginibus minute antrorse scabridiusculis cetera glabrae; contraligula ovato-deltata circa 5 mm longa nervosa margine ciliato; foliorum laminae (8-)20-50 mm longae 10-18(-23) mm latae lineares post apicem (2-)7-12 cm abrupte angustatae et sursum gradatim decrescentes marginibus et costis abaxialibus non nisi prope apicem extremum antrorse scabridiusculis. Inflorescentiae 1-2, terminales et interdum e folii summi axilla ortae, terminalis 4-8 cm longa 3-5 cm lata composita lateralis breviora pyramidalis ramis rigidis patentibus rubro-purpureis bracteis foliaceis suffultis; rhachis principalis rami primarii ramulique acute angulati praeter interdum distales sparse scabridiusculi glabri haud passim puberuli; bracteolae setaceae ad basim longi-ciliatae. Spiculae spicatae vel racemosae; pistillatae circa 5 mm longae sessiles vel subsessiles, vulgo spicula staminata 3.5-4 mm longa pedicellata concomitata pare bracteola filiformi ad basim lata valde ciliata suffulta. Hypogynium trilobatum lobis circa 2 mm longis 3 mm latis circa dimidiis versus basim irregulariter fissis eburneum apicibus atrantibus. Achenium 4 mm longum 3 mm latum ovoideo-ellipsoideum exapiculatum laeve nitens ad apicem puncto albo basim azureo-lacticolor cetera atropurpureum.

Trinidad. Las Lapas Trace, off Arima-Blanchisseuse road, 21.ii.1981, Adams 14806 (holotype K; isotypes BM, TRIN 29929).

Additional collections:

Morne Bleu, 31.xii.1925, Williams s.n. (TRIN 11495); Las Lapas Trace, 6.ix.1973, Adams 13803 (TRIN 20848).

Endemic to the Northern Range of Trinidad.

This species is closest to S. latifolia Swartz. It is

distinguished by its ovoid-ellipsoid achenes, narrower leaves and differences of indumentum. The likelihood of its having arisen as a hybrid between that species and S. melaleuca Reichb. ex Schldl. & Cham. should be considered.

The name is given to commemorate Robert Orchard Williams, economic botanist, who served with the Government of Trinidad between 1916 and 1934, and was, with Professor E.E.Cheesman, responsible for the preparation of early parts of the Flora of Trinidad and Tobago.

Torulinium macrocephalum (Liebmann) C. B. Clarke var.

davidsei C. Adams, var. nov.

Inflorescentia radiis primariis secundariisque evolutis. Spicae 2-5 cm longae lineares plerumque simplices racemosae bracteis secundariis foliosis subtentis. Spiculae 5-8(-10) mm longae; flosculi plerumque 4-8; glumae 2-2.5 longae.

Trinidad. 1 mile W of Blanchisseuse at Marian(n)e River crossing, 31.vii.1970, Davidse 2477 (holotype MO).

Additional collections:

Diego Martin, Mahault, 26.viii.1916, Broadway s.n. (TRIN 8459); River Estate, 2.iii.1920, Britton & Hazen 187 (K, NY); Bande de L'Est, Mayaro, ? Finlay in 1866 (TRIN 2085).

Typical T. macrocephalum has an inflorescence without evident rays, the spikes being congested into a usually solitary rounded compound head. Other varieties are radiate, T. macrocephalum var. eggersii having ovoid sessile spikes in clusters at the ends of primary rays and this new variety having linear peduncled spikes in short racemes.

The name of the new variety eponymises Dr. Gerrit Davidse, Curator, Missouri Botanical Garden.

A NEW ARIZONA PURSHIA (ROSACEAE)

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Recent critical morphologic analysis of the extreme variation included within the central Arizona species, Purshia subintegra (Kearney) Henrickson (Henrickson, 1986) and similar variation observed on lectotype and isotype preparations of the basionym (Schaack, 1987) indicate that P. subintegra was based on material of hybrid origin. Morphology and phenology displayed in central Arizona hybrid residuum suggests that this nothospecies was formed via past hybridization between Purshia stansburiana (Torr.) Henrickson and an unnamed species previously included within P. subintegra. This unnamed species, now confined to calcareous substrate in Graham County, Arizona, is here described. Data to support the hybrid origin of P. subintegra will be presented elsewhere.

PURSHIA PINKAVAE Schaack, sp. nov.

Species haec et P. ericifolia (Torr.) Henrickson folia linearia vel angustissime spatulata integra valde revoluta speciebus aliis Purshiae differunt. E P. ericifolia brachyblastis cylindricis lignosis, foliis dispositis alternatim helicaleque cum apicibus rotundatis minute mucronatis, hypanthis normaliter eglandulosis et tempore fructificante infundibuliformibus praecoce deciduis, lobis calycis non-apiculatis pubescentibus (superne sericeis, subtus plus minusve glabris) distinguenda.

TYPE: U.S.A.: Arizona: Graham Co., along US highway 70, ca. 16 km northwest of Bylas, 11 Apr 1987, Schaack 2046 & Schaack (holotype ASC; isotypes to be distributed).

Intricately branched shrubs to 1.4 m tall, multistemmed or with a very short single trunk; bark of older stems dark gray, fissured and shredding; upper branches light gray and smooth; woody spurs light gray, round in cross section, branched or unbranched, in part composed of, and roughened by, lignified stipularpodia. Leaves helically alternate, in clusters on young growth or at the apex of woody spurs. Leaf blades borne on herbaceous-coriaceous ciliate-margined stipularpodia, green or brownish-green with age, perennial, herbaceous-coriaceous, linear-very narrowly spatulate, largest blade per woody spur 6-15 times as long as wide; upper

surface loosely arachnoid and scabrescent when young, glabrate-glabrous in age, not punctate; lower surface lanate when young; margins entire, revolute to strongly so; apex minutely mucronate or obtuse. Flowers 1 per spur or spur branch, sessile or pedicellate; pedicels 1-7 (-13) mm long, normally eglandular, moderately villous-lanate; hypanthium narrowly funnelform, ca. twice as long as wide, normally eglandular, moderately villous-lanate, funnelform-broadly funnelform and soon deciduous in fruit; calyx 5-lobed, sepals ovate and obovate, 2.0-5.5 mm long, eglandular, moderately villous-lanate, not apiculate; petals normally 5, ochroleucous (white?) and occasionally red or pink-tinged, obovate-spatulate, largest petal (1.3-) 1.5-2.0 times as long as wide, glabrous or occasionally pubescent apically; stamens many, 2 (-3) series, inserted on the hypanthium; pistils sessile, distinct, 2-4 (-5) per flower. Achenes at maturity ca. 5-7 mm long, 2.8-3.3 mm wide, brown,  $\pm$  lanceolate, strongly striate with ca. 14-20 striae, sericeous above and  $\pm$  glabrous below; fruiting styles terminal, plumose, (17-) 20-50 (-55) mm long; fruiting stigmas 1-2 mm long or less.  $\bar{n}$  = 9. Anthesis late March-mid April. Plants restricted to late Tertiary calcareous, lacustrine deposits ca. 16-21 km northwest of Bylas, Graham County, Arizona.

ADDITIONAL SPECIMENS EXAMINED. U.S.A.: Arizona: Graham Co., US highway 70, ca. 16 km NW of Bylas, 9 Apr 1984, 11 Apr 1985, Anderson 84-11, 84-12, 85-5 (ASU); ca. 18 km NW of Bylas, 17 Mar 1982, Clark 1506 & Parfitt (ASU); milepost 284 NW of Bylas, 18 Sept 1976, McGill & Lehto 120683 (ASU); ca. 20 km NW of Bylas, 7 Sept 1968, Pinkava, Keil & Lehto 113397 (ASU); ca. 15.3 km NW of Bylas, 7 Apr 1969, Pinkava, Keil & Lehto 115583 (ASU); ca. 17.7 km NW of Bylas, 16 June 1974, Roberts & Keil 10126 (ASU); ca. 21 km NW of Bylas, 12 Apr 1986, Schaack 1742-1751 & Schaack (ASC); ca. 16 km NW of Bylas, 16 May 1987, Schaack 2066-2068 & Schaack (ASC); between milepost 283 & 282 NW of Bylas, 16 May 1987, Schaack 2069 & 2070 & Schaack (ASC).

This species is named in honor of Donald J. Pinkava, Professor of Botany at Arizona State University, student of Purshia, and the Arizona flora, in particular Cactaceae and Asteraceae. He was among those first to collect and report (Pinkava et. al., 1970) the Graham County material northwest of Bylas.

The linear-very narrowly spatulate, entire, strongly revolute leaf blades of P. pinkavae and P. ericifolia contrast strongly with, and readily distinguish these species from, the obovate (in outline) lobed, or toothed blades of other Purshia. The cylindrical woody spurs, helically alternate leaves with minutely mucronate-rounded apices, 2-4 (-5) achenes per flower, normally eglandular hypanthia, funnelform and soon deciduous fruiting hypanthia and eglandular non-apiculate sepals of P. pinkavae distinguish this species from P. ericifolia. Purshia ericifolia



has flattened and often twisted woody spurs, distichous alternate leaves with aristate tips, 8-17 achenes per flower, normally stipitate glandular hypanthia, campanulate-broadly campanulate persistent fruiting hypanthia and stipitate glandular apiculate (in bud and at anthesis) sepals. Specific relationships in *Purshia* (*P. pinkavae* and *P. ericifolia*) and the importance of hybridization as a speciation mechanism in *Purshia* will be topics for future investigations.

#### ACKNOWLEDGEMENTS

I thank Drs. David J. Keil, James Rominger and particularly Donald J. Pinkava for comments and criticisms on an earlier draft of this manuscript. Dr. David J. Keil kindly provided the Latin translation for the diagnosis of *P. pinkavae* and I gratefully acknowledge his assistance.

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**TAXONOMIC IDENTITY OF *LEUCAENA LEUCOCEPHALA* (LAM.)  
DE WIT, WITH A NEW COMBINATION.**

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A considerable amount of agronomic research has been produced about *Leucaena leucocephala* (Lam.) de Wit (1961), well known in the tropics both as a weed and for its multiple uses (Dijkman, 1950; National Academy of Science, 1977). De Wit (1961) published this combination based on a description by Lamarck (1783), of which a type specimen exists in Lamarck's Herbarium in Paris (P.LA). The validation of Lamarck's epithet, in replacement of the Linnaean epithet *glauca*, generated a series of controversial papers (Isely, 1986, and references therein); however, the systematic identity of the binomial requires further clarification.

A native to Mexico and Central America, this species was introduced by the Spaniards to the Philippine Islands during the XVI century; from there it expanded to its present pantropical distribution. Study of the Mexican populations of *L. leucocephala* led to the recognition of two distinct, but closely related taxa, and subspecific rank was proposed for them (Zárate P., 1982).

Confusion exists as to the correct names of the three recognized horticultural varieties: 'Hawaii', 'Salvador' and 'Peru'. The 'Hawaii' type was characterized from naturalized Hawaiian populations as a ramose shrub, flowering in all seasons, pantropically established as a successful colonizer (Brewbaker, 1975). The descriptions of *L. leucocephala* from Hawaii (Degener, 1946), as well as from the Yucatan Peninsula and the Tehuantepec Isthmus (Zárate P., 1982), clearly match Lamarck's (1783) *Mimosa leucocephala*.

The second agronomic type, known as 'Salvador' or 'Hawaiian Giant', despite the fact that it originated in Mexico (Brewbaker, 1975), is a fast growing, tall tree, flowering annually. The name 'Salvador', alluding to Central American origin, led to confusion with *L. salvadorensis* (Brewbaker, 1978, 1984), a different species (Zárate P., 1987). Both the 'Salvador' and 'Peru' types, the latter characterized by its ramose, arborescent habit, belong to a distinct taxon distributed in Mexico and Central America at altitudes from sea level to ca. 1000 m. It was described by J.N. Rose (1897) as *L. glabrata*, and is thus combined: *L. leucocephala*

(Lam.) de Wit subsp. *glabrata* (Rose) Zárate P., comb. et stat. nov., *L. glabrata* Rose, Contr. U.S. Natl. Herb. 5:140-141, 1897. Mexico: Guerrero: 'near Acapulco', Palmer 368 (Holotype, US; Isotypes, A!, GH!)

Both subspecies are cultivated for their edible seeds in Mexico, where their domestication probably occurred independently. *L. leucocephala* subsp. *glabrata* predominates as a cultigen, while subsp. *leucocephala* is an isolated domesticate (Zárate P., unpublished). Despite this, it is the latter subspecies that is now found naturalized in the Philippines, to where it must have been carried by the colonists; the explanation for this is not clear. It could have been an accidental dispersal, e.g. with the sand used as ballast in the ship journey from Mexico, or perhaps both subspecies were introduced, and selection was the cause for the establishment of subsp. *leucocephala*, better adapted to calcareous substrates such as seashores and coral reefs. In commercially propagated lineages (e.g. 'PERU' & K67), segregation for pubescence of legumes and leaves has been observed (Soto & Zárate P. 52, 53 MEXU). In the Tehuantepec Isthmus region subsp. *leucocephala* has atypical glabrescent legumes but the usual canescent leaf buds and ciliate leaflets. These facts suggest that despite the species' known self-compatibility (Brewbaker, 1982), gene exchange between the subspecies is possible and could have had a role in the development of the naturalized taxon, as well as in artificial selection of cultigens both recently and during the early domestication of the species.

The taxa may be distinguished as follows:

Small trees or shrubs 1-6 m tall. Foliar buds canescent; petiolar gland 1.5-2.5 mm long; pinnae 6-9 pairs; leaflets 9-18 pairs, 9-12 mm long, ciliate. Flowering buds canescent. Legume 13-16 x 1.2-1.5 cm, the stipe 7-10 mm long, velutinous or glabrescent. Seeds 5-8 mm long, 4-5 mm wide. Flowering in response to water.

..... subsp. *leucocephala*

Trees or shrubs 3-12 m tall, or taller. Foliar buds glabrate; petiolar gland 1-4 mm long; pinnae 3-8 pairs; leaflets 11-24 pairs, 8-15 mm long, glabrous. Flowering buds glabrous. Legume 11-18 x 1.2-2.3 cm, the stipe 10-20 mm long, glabrous. Seeds 6-10 mm long, 3-6 mm wide. Flowering once a year.

..... subsp. *glabrata*

#### ACKNOWLEDGEMENTS

The Instituto de Biología, U.N.A.M. through the Herbario Nacional (MEXU) provided the funds for field work. M. en C. Mario Sousa S., former curator of MEXU, made available to me the type specimens loaned from A and GH, as well as his expertise.

Silvia E. Purata V. photographed the type specimens in P.L.A for me. To Prof. Charles B. Heiser, Jr. for his ideas on plant dispersion to the Philippines. George Yatskievych reviewed and improved the manuscript.

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A NEW SPECIES OF SABAZIA (ASTERACEAE, HELIANTHEAE) FROM  
DURANGO, MEXICO

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A forthcoming taxonomic treatment of the Asteraceae of Mexico (Turner and Nesom, in prep.) necessitates description of the following new species from Durango, Mexico.

Sabazia gonzalezae B. L. Turner, sp. nov.

S. liebmannii Klatt simile sed pedunculis brevioribus glanduli-pubescentibus et capitulis angustioribus campanulatis differt.

Perennial herbs 40-50 cm high, the stems single and arising from slender nodose rhizomes, the root system fibrous at each node. Stems stiffly hirsute below, this grading upwards into a dense vestiture of glandular-trichomes. Leaves opposite, 3-5 cm long, 1.5-2.5 cm wide; petioles 2-5 mm long; blades ovate, 3-nervate, pubescent above and beneath, the leaves 6-8 dentate along each side, the apices acute to obtuse. Heads in a cluster of 3-4 in terminal corymbs, the latter on peduncles 9-11 cm long, the ultimate peduncles 0.8-2.0 cm long. Involucre campanulate, 3-4 seriate, more or less imbricate, 4-5 mm high, ca 6 mm wide; bracts ovate to elliptic, 3-5 mm long, 2-3 mm wide, somewhat scarious, the apices obtuse or rounded. Receptacular pales trifid. Ray florets 5-8; corollas white, the tube ca 2.5 mm long, densely pubescent, the ligules, 3-lobed, 5-8 mm long, ca 4 mm wide. Disk florets 20-30; corollas yellow, 4-5 mm long, the tube 1.0-1.5 mm long, the lobes ca 0.4 mm long. Achenes black, glabrous, striate, clavate, somewhat dorsally compressed, 2.0-2.5 mm long; pappus absent.

TYPE: MEXICO. DURANGO: Mpio. de Mesquital, 20 km de La Guajolota por al camino a Sn. Fco. Ocotan, 2440 m, 14 Nov 1985, M. Gonzalez et al. 1882 (holotype TEX; isotypes to be distributed)

Additional specimen examined: DURANGO: Mpio. de Mezquital, 7 km al N La Guajolota, rumbo a Las Papas, 27 Aug 1985, I Solis 362 (TEX).

Sabazia gonzalezae is related to the more southern S. liebmannii Klatt and, except for its slender rhizomes, would key to that species in Longpre's (1970) treatment

of the genus. McVaugh (1984), however, notes that the rhizomes of the latter may be thick or thin, which seems to be so, making the relationship between these two taxa fairly close. Within S. liebmannii the present taxon would key to the var. ovatifolia Longpre (confined to Oaxaca), largely because the leaves are less than twice as long as wide. Actually, S. liebmannii is a wide-ranging variable taxon and I can see little or no justification for the recognition of 4 varieties as accorded the species by Longpre. This might also be inferred from McVaugh's treatment of S. liebmannii, for he not only refers to Longpre's var. michoacana as a "form", he also sinks into synonymy under S. liebmannii the very different S. tridacoides Urbatsch & B. Turner. Actually the latter species is more closely related to taxa belonging to the recently resurrected Alloispermum (Robinson, 1979) than it is to Sabazia liebmannii. Unfortunately, McVaugh does not comment upon the generic problems relating to Alloispermum (a segregate from Calea) and I can only conclude that he has not understood the variation in this group, in spite of his observation that the characters of S. tridacoides "are not significantly different from those recorded for S. liebmannii."

Inclusion of the present taxon in Sabazia is provisional. It might be that this genus will ultimately reside in synonymy under the older Alloispermum (Robinson, 1979). If so, however, it must relate to the "Sabazioid" species within this group and not to those centering about A. caracasenum (H.B.K.) H. Rob., its generotype.

Its a pleasure to name this species for Dr. M. Gonzalez who has assembled a fine series of Asteraceae from the Mezquital region of Durango.

#### ACKNOWLEDGEMENTS

I am grateful to Dr. Guy Nesom for the Latin diagnosis and to Dr. Linda Vorobik for the excellent illustration.

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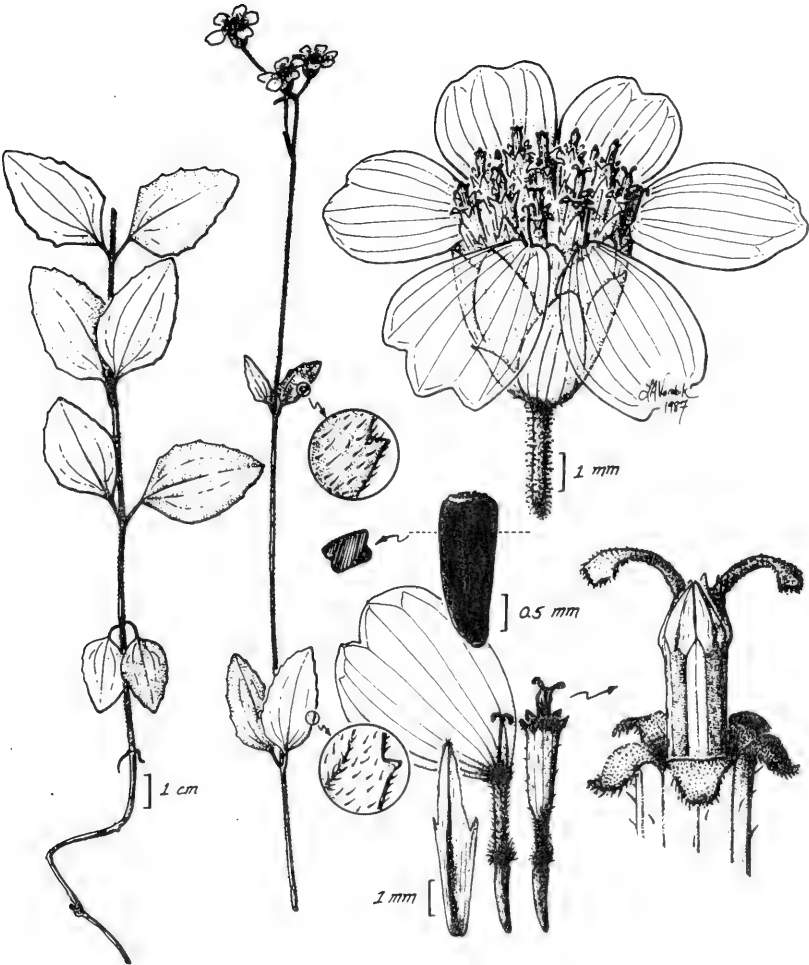


Fig.1. *Sabazia gonzalezae*, from holotype.

## TWO NEW FORMS OF *HELIANTHUS AGRESTIS*

Eileen R. Wolde

### *Helianthus agrestis* Pollard f. *almae* E. R. Wolde

Forma haec ab forma typica floribus solum usque 2 cm latis, dimidio inferno ligularum luteo, superno rufo-fusco, stigmatibus virescenti-luteis, foliis caulibusque juventute viridibus, ante anthesin purpureo-rufis, vetustate fuscescentibus, caulibus non glaucis differt.

This form differs from the typical form by the flowers only to 2 cm wide, by the lower half of the ligules yellow, the upper red-brown, by the stigmas greenish-yellow, by the leaves and stems in youth green, before anthesis purple-red, with age darkening, by the stems not glaucous.

This new form was collected by the author on November 2, 1986, 460 feet south of Bayshore Road, half-way between Crescent Lake and Magnolia Drives, North Fort Myers, Lee County, Florida, and is deposited in the Lundell Herbarium (L.L.) at the University of Texas, Austin, Texas.

This sunflower is named in honor of Alma Moldenke, teacher, author and co-publisher of *Phytologia* for the past 35 years, with a lifelong dedication to biological education and to environmental and conservation causes.

### *Helianthus agrestis* Pollard f. *oswaldii* E. R. Wolde

Forma haec ab forma typica floribus solum usque 25 mm latis, stigmatibus pallide viridibus, foliis caulibusque primo in juventute viridibus, tandem purpureo-rufescentibus, caulibus non glaucis differt.

This form differs from the typical form by the flowers only to 25 mm wide, by the stigmas pale green, by the leaves and stem first in youth green, then becoming purple-red, by the stems not glaucous.

This new form was collected by Frederick W. Oswald, in whose honor it is named, on October 19, 1986, 440 feet south of Bayshore Road half-way between Crescent Lake and Magnolia Drives, North Fort Myers, Lee County, Florida, and is deposited in the Lundell Herbarium (L.L.) at the University of Texas, Austin, Texas.



## BOOK REVIEWS

Alma L. Moldenke

"SYMBIOSIS - An Introduction to Biological Associations" by Vernon Ahmadjian and Surindar Paracer, xii + 212 pp., 70 black/white fig. incl. 62 photo., University Press of New England, Hanover, New Hampshire 03755. 1986. \$32.50.

Herein symbiosis is interpreted as first defined by H. Anton de Bary in 1879 as a living together of different types of organisms to include not only mutualism but also commensalism and parasitism. Such incidents occur widely in all five kingdoms - monerans, protocists, fungi, plants and animals - from the invasions of some monerans into others to produce particulate cells with chloroplasts and mitotically dividing nuclei, to lichen associations, to alternate hosting of parasites and pathogenic relationships, and to elaborate co-evolutionary development of certain insect pollinators and specialized floral development. This book should encourage the teaching of courses in symbiosis. The language of this excellent text is clear, the concepts effectively developed, the reading stimulating, the reference sources and illustrations well chosen and the end of chapter review questions cover the topics meaningfully. There is a very well organized appendix on "Historical Landmarks in Symbiosis". In a dream I am readying to ask the head of department to let me teach such a course with this text.

"FLORA HAWAIIENSIS Book 7 or New Illustrated Flora of the Hawaiian Islands" by Otto Degener and Isa Degener ca. 300 pp., 80 black/white botanical plates, 1 map, 4 pl + 7 botanist black/white photos. Privately published by the authors in Volcano, Hawaii 96785, 1986. \$10.00 paperbound.

It is wonderful that the authors are able to present serially their life-time botanical studies in this very convenient form of general and historical descriptions, family descriptions and keys to genera, species and subspecific units, special tributes with photographs to such leading Hawaiian botanists as Marie C. Neal, and a Hawaiian Plant Names List with the botanical and English equivalents prepared also by Noah Pekelo, Jr. The binding breaks easily - intentionally - so that the flora pages which are already provided with three looseleaf holes can be rearranged phylogenetically, alphabetically with the previously published parts or however is most efficient for the student or scholar of Hawaiian botany. We Moldenkes, along with innumerable other botanists, are grateful for the authors' long time friendship and their valuable scientific contributions.

"IKEBANA - FRUITS AND VEGETABLES" by Toshie Yokoi, 104 pp., 82 color photo. and 4 black/white fig. Charles E. Tuttle Co., Inc. Rutland, Vermont 05701-0410. 1987. \$24.95.

The gifted artist-author is married to a professor of agriculture and is a pioneer in using farm and field flowering and fruiting products for ikebana so that village folks in the agricultural and rural areas can develop and express their appreciation for the beauties of nature. There are depicted exquisite arrangements of sunflowers and vine tomatoes, sweet potatoes and their attached vines, brussel sprouts and daffodils, and colored small rice cake balls fastened onto dogwood twigs. These and the many others illustrated in beautiful color photography display every bit as much beauty as the florist-purchased plants in the more usual forms of ikebana. Mrs. Fay Kramer, president emeritus of Ikebana International, could have been even more helpful in checking the English.

"PLAIN OL' CHARLIE DEAM - Pioneer Hoosier Botanist" by Robert C. Kriebel x + 183 pp., 19 black/white photos. Purdue University Press, West Lafayette, Indiana 47907. 1987. \$12.95 paperbound.

The author is an appreciative family friend of this self-taught Hoosier botanist who logged more than 100,000 miles in his native state during his field collecting and studying and who provided more than half of the 130,000 herbarium specimens in the Indiana University Deam Herbarium. Deam's "Flora of Indiana" is a masterpiece admired by so many field and taxonomic botanists. These are the climaxes of Deam's long, interesting, vital life which the author describes so naturally and effectively over the years along with the ideas, current events, and people from all walks of life

- amateur naturalists, professional botanists, foresters, politicians, family that interacted with him.

"THE ADVENTURES OF CHARLES DARWIN" by Peter Ward, 108 pp., 14 color drawings, 1 color map, 11 black/white drawings, Cambridge University Press, Cambridge and London, U. K. and New York, N. Y. 10022, clothbound 1982, \$10.95 & paperbound 1986 \$5.95.

"This book is a (juvenile) adventure story based closely on the diaries of Darwin's exploits on his famous round-the-world voyage. The young Charles Darwin was a likeable bold person with a great thirst for travel and new experiences." It is through the eyes and ears of an invented raw likeable cabin boy George that readers learn of many of Darwin's observations, collections, temporary land trips and cogitations aboard H.M.S. Beagle starting in 1831 and lasting for five years. Even adults would like the book for quick reading.

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